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UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF OHIO
EASTERN DIVISION

CENTER FOR BIOLOGICAL DIVERSITY,
HEARTWOOD, OHIO ENVIRONMENTAL
COUNCIL, SIERRA CLUB

Plaintiffs,

vs.

U.S. FOREST SERVICE,
et al.,

Federal Defendants,

and

AMERICAN PETROLEUM INSTITUTE,
et al.,

Intervenor-Defendants

Civ. No. 2:17-cv-372

Judge Watson

Magistrate Judge Jolson

**PLAINTIFFS' NOTICE OF MOTION;
MOTION FOR SUMMARY JUDGMENT
AND OPENING BRIEF IN SUPPORT
THEREOF**

ORAL ARGUMENT REQUESTED

NOTICE OF MOTION

TO ALL PARTIES AND THEIR COUNSEL OF RECORD:

Please be notified that Plaintiffs Center for Biological Diversity, Heartwood, Ohio Environmental Council, and Sierra Club hereby move for summary judgment, as there is no genuine dispute as to any material fact and Plaintiffs are entitled to judgment as a matter of law. For the reasons set forth in the Opening Brief below, the U.S. Bureau of Land Management's approval to make available 40,000 acres of Ohio's Wayne National Forest to oil and gas leasing, and the U.S. Forest Service's and BLM's authorizing lease sales of over 1,800 acres in the Forest violated the National Environmental Policy Act, 42 U.S.C. §§ 4321 *et seq.*, the Administrative Procedure Act, 5 U.S.C. §§ 500 *et seq.*, and the Endangered Species Act, 16 U.S.C. §§ 1531 *et seq.* To remedy these violations of law, Plaintiffs seek an order vacating and remanding the lease sales, the underlying BLM and U.S. Forest decision documents, and any leases issued pursuant to the sales. This motion is based on the Opening Brief below; the declarations filed herewith and exhibits attached thereto; Plaintiffs' Motion to Take Judicial Notice and exhibit attached thereto; and upon such other argument as the Court may consider.

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**OPENING BRIEF IN SUPPORT OF
PLAINTIFFS' MOTION FOR SUMMARY
JUDGMENT**

ORAL ARGUMENT REQUESTED

TABLE OF ACRONYMS

2005 BiOp	2005 Biological Opinion for the 2006 Forest Plan
2006 EIS	Environmental Impact Statement for the 2006 Forest Plan
2006 RFDS	Reasonably Foreseeable Development Scenario for the 2006 Forest Plan
2012 SIR	2012 Supplemental Information Report
BLM	Bureau of Land Management
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FONSI	Finding of No Significant Impact
FWS	Fish and Wildlife Service
MOU	Memorandum of Understanding
NAAQS	national ambient air quality standards
NEPA	National Environmental Policy Act
NOx	oxides of nitrogen
ODNR	Ohio Department of Natural Resources
USFS	U.S. Forest Service
VOC	volatile organic compounds
WNF	Wayne National Forest

INTRODUCTION

This case concerns whether federal agencies can authorize new and disruptive oil and gas drilling operations and techniques, including fracking, on Ohio’s Wayne National Forest, without first analyzing and disclosing the consequences of those activities. The National Environmental Policy Act requires agencies to take a “hard look” at the environmental consequences of proposed actions. Here, no agency of the federal government has met that fundamental legal duty to review and disclose those impacts before allowing irreversible harm to the Forest’s resources.

The U.S. Bureau of Land Management (BLM) and U.S. Forest Service (USFS) both have jurisdiction over the leasing and development of federal lands and minerals. In October 2016, BLM authorized oil and gas leasing of 40,000 acres in the Wayne National Forest’s (Forest or WNF) Marietta Unit, opening up the Forest to horizontal drilling and high-volume hydraulic fracturing (“fracking”) of the Utica shale for the first time. Horizontal drilling and fracking involve high-pressure injection of millions of gallons of toxic fluids underground, to fracture shale rock and release natural gas. These unconventional extraction methods pose greater risks to air, water, and public health than conventional vertical drilling because they involve significantly greater water and chemical use; higher levels of waste production; significantly more heavy truck traffic; and larger industrial equipment. Horizontal drilling also requires an extensive network of infrastructure and related development to support large-scale operations, and thus necessitates more land clearance and destruction of wildlife habitat than vertical drilling.

In December 2016 and March 2017, BLM approved two lease auctions of parcels of federal land and minerals in the Forest, totaling over 1,800 acres. USFS—the agency in charge of managing the Forest’s surface resources—“consented” to the leasing of these parcels. Both agencies failed to fulfill their duties under the National Environmental Policy Act (NEPA), 42 U.S.C. § 4321, *et seq.*, to disclose all reasonably foreseeable and potentially significant environmental effects of this leasing, *before* allowing leasing to go forward.

In consenting to the leasing of these parcels, USFS relied on an outdated 2006 Environmental Impact Statement (EIS) for the Forest’s Land and Resource Management Plan (2006 Forest Plan), which did not address the impacts of horizontal drilling and fracking. USFS

1 claimed in an internal 2012 “Supplemental Information Report” that despite the introduction of
 2 these new techniques, further study and public disclosure in a supplemental EIS was not
 3 required. But USFS has never taken the required “hard look” at a number of important issues,
 4 such as increased forest clearing and habitat destruction from development of horizontal wells,
 5 including due to oil and gas “gathering” pipelines; the potential for horizontal well development
 6 on private surface in the Forest, which could increase the total number of horizontal wells and
 7 well sites developed, and result in unmitigated destruction of roost habitat for the endangered
 8 Indiana bat, as well as unchecked massive water depletions from streams for fracking; and, air
 9 pollution impacts from horizontal well development. BLM’s 2016 Environmental Assessment
 10 and Finding of No Significant Impact, which underlie both its decision to make all federal
 11 minerals in the Marietta Unit available for oil and gas leasing and its decision to approve
 12 subsequent lease auctions in the Marietta Unit, fail for the same reasons. Under NEPA, BLM
 13 was required to perform a more detailed environmental review and analyze these significant
 14 unexamined effects in an EIS.

15 USFS, BLM, and the U.S. Fish and Wildlife Service (FWS) also failed to comply with
 16 their duties under Section 7 of the Endangered Species Act (ESA) to reinitiate consultation
 17 regarding the effects of oil and gas development on the endangered Indiana bat. 16 U.S.C. §
 18 1536(a)(2). Instead, they arbitrarily found that a 2005 Biological Opinion for the 2006 Forest
 19 Plan adequately addressed these effects. That finding failed to consider important new
 20 information post-dating the Biological Opinion, including increased habitat degradation and
 21 destruction from horizontal well development, such as removal of maternal roost trees.

22 Accordingly, Plaintiffs Center for Biological Diversity, Ohio Environmental Council,
 23 Heartwood, and Sierra Club respectfully request that the Court set aside BLM’s approval of oil
 24 and gas leasing in the Forest, USFS’s consent to lease parcels, and BLM’s decisions to approve
 25 the December 2016 and March 2017 lease auctions. Plaintiffs further request that the Court order
 26 USFS, BLM, and FWS to reinitiate ESA Section 7 consultation on the 2006 Forest Plan.

27 **STATUTORY BACKGROUND**

28 **I. The National Environmental Policy Act**

1 The National Environmental Policy Act is “our basic national charter for protection of the
 2 environment.” 40 C.F.R. § 1500.1(a). “NEPA has twin aims. First, it places upon an agency the
 3 obligation to consider every significant aspect of the environmental impact of a proposed action,
 4 and to consider reasonable alternatives that could mitigate those impacts. Second, it ensures that
 5 the agency will inform the public that it has indeed considered environmental concerns in its
 6 decisionmaking process.” *Balt. Gas & Elec. Co. v. Natural Res. Def. Council*, 462 U.S. 87, 97
 7 (1983) (citation omitted). “By focusing both agency and public attention on the environmental
 8 effects of proposed actions, NEPA facilitates informed decision-making by agencies....” and
 9 “public involvement” in those decisions. *N.M. ex rel. Richardson v. BLM*, 565 F.3d 683, 703
 10 (10th Cir. 2009).

11 To accomplish these objectives, NEPA requires “responsible [federal] officials” to
 12 prepare an environmental impact statement to consider the effects of each “major Federal
 13 action[] significantly affecting the quality of the human environment.” 42 U.S.C. §
 14 4332(2)(C)(i). An EIS must detail, among other things, “the environmental impact of the
 15 proposed action,” “any adverse environmental effects which cannot be avoided,” and any
 16 reasonable alternatives. 42 U.S.C. § 4332(2)(C). It must analyze not only the direct impacts of a
 17 proposed action, but also its indirect and cumulative impacts. 40 C.F.R. §§ 1502.16, 1508.7,
 18 1508.8. “[A]ssessment of a given environmental impact must occur as soon as that impact is
 19 ‘reasonably foreseeable.’” *Richardson*, 565 F.3d at 716 (citing 40 C.F.R. § 1502.22); *see also*
 20 *Kern v. BLM*, 284 F.3d 1062, 1072 (9th Cir. 2002) (“NEPA is not designed to postpone analysis
 21 of an environmental consequence to the last possible moment. Rather, it is designed to require
 22 such analysis as soon as it can reasonably be done.”). This ensures “environmental information is
 23 available to public officials and citizens before decisions are made and before actions are taken.”
 24 40 C.F.R. § 1500.1(b). The information presented “must be of high quality.” *Id.* Accordingly,
 25 “[a]ccurate scientific analysis...and public scrutiny are essential to implementing NEPA.” *Id.*

26 To determine whether the impacts of a proposed action are significant enough to require
 27 preparation of an EIS, the agency may prepare an Environmental Assessment (“EA”). 40 C.F.R.
 28 § 1501.4(c). The EA must include “brief discussions of the need for the proposal, of

alternatives..., [and] of the environmental impacts of the proposed action and alternatives.” 40 C.F.R. § 1508.9. Determination of the significance of a project’s effects involves consideration of “context and intensity.” 40 C.F.R. § 1508.27; *see also* section I(F), *infra*. “If substantial questions are raised whether a project may have a significant effect upon the human environment, an EIS must be prepared.” *North Am. Wild Sheep v. U.S. Dept. of Agric.*, 681 F.2d 1172, 1177-78 (9th Cir. 1982); *see also Anglers of the Au Sable v. U.S. Forest Serv.*, 565 F. Supp. 2d 812, 825 (E.D. Mich. 2008).

The preparation of an EA and FONSI or EIS does not terminate an agency’s duties under NEPA. “Even if the agency prepared an EIS when the project was first initiated, it must prepare a supplemental EIS (‘SEIS’) if the agency intends to make ‘substantial changes’ to the action or if ‘there are significant new circumstances,’ and those changes or new circumstances would relate to the project’s effects on the environment.” *United States v. City of Detroit*, 329 F.3d 515, 529 (6th Cir. 2003) (citing 40 C.F.R. § 1502.9(c)(1)). Agencies may use internal, non-NEPA procedures and documents, such as a Supplemental Information Report, to determine if new information requires preparation of a supplemental EA or EIS, but such documents may not be used to correct deficiencies in an EA or EIS, or “serve as a substitute” for them. *See Idaho Sporting Cong., Inc. v. Alexander*, 222 F.3d 562, 566 (9th Cir. 2000).

II. The Endangered Species Act

The ESA provides for the conservation of endangered and threatened fish, wildlife, and plants, as well as their natural habitats. 16 U.S.C. §§ 1531, 1532. When Congress enacted the ESA, it “intended endangered species to be afforded the highest of priorities.” *Tenn. Valley Auth. v. Hill*, 437 U.S. 153, 174, 98 S. Ct. 2279, 57 L. Ed. 2d 117 (1978).

Section 7 of the ESA requires federal agencies to “insure that any action authorized, funded, or carried out by such agency... is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined... to be critical.” 16 U.S.C. § 1536(a)(2). An agency can only fulfill its duties under Section 7 by satisfying the consultation requirements set forth in

1 its implementing regulations—only then can an action that “may affect” a protected species go
2 forward. *Lane Cty. Audubon Soc’y v. Jamison*, 958 F.2d 290, 295 (9th Cir. 1992).

3 The definition of agency “action” is broad and includes “all activities or programs of any
4 kind authorized, funded, or carried out, in whole or in part, by Federal agencies,” including
5 programmatic actions. 50 C.F.R. § 402.02. The “action area” includes “all areas to be affected
6 directly or indirectly by the Federal action and not merely the immediate area involved in the
7 action.” *Id.* If listed species “may” be present in the action area, the action agency must prepare a
8 “biological assessment” to determine whether the species may be affected by the proposed
9 action. *See* 50 C.F.R. § 402.12(d)(1). However, formal consultation may be avoided if the action
10 agency concludes that the proposed action is “not likely to adversely affect” a listed species that
11 occurs in the action area, and FWS concurs in writing with this determination. 50 C.F.R. §§
12 402.13(a), 402.14(b). This process is known as “informal consultation.” 50 C.F.R. § 402.13(a).

13 Formal consultation commences with the action agency’s written request for consultation
14 and concludes with FWS’s issuance of a “biological opinion.” 50 C.F.R. § 402.02. The
15 biological opinion states FWS’s opinion as to whether the effects of the action are “likely to
16 jeopardize the continued existence of listed species or result in the destruction or adverse
17 modification of critical habitat.” *Id.* § 402.14(g)(4). When conducting formal consultation, FWS
18 and the action agency must evaluate the “effects of the action,” including all direct and indirect
19 effects. *Id.* §§ 402.14, 402.02. In doing so, they must use the “best scientific and commercial
20 data available.” *See* 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.14(d), (g)(8).

21 After the issuance of a biological opinion, the agency must reinstitute consultation if,
22 among other things, “new information reveals effects of the action that may affect listed species
23 or critical habitat in a manner or to an extent not previously considered,” or “the identified action
24 is subsequently modified in a manner that causes an effect to the listed species ... that was not
25 considered in the biological opinion.” 50 C.F.R. § 402.16(b), (c).

26 **III. Oil and Gas Leasing on National Forest Land**

27 Under the Mineral Leasing Act (MLA), 30 U.S.C. § 181 *et seq.*, the Secretary of the
28 Interior may lease subsurface oil and gas minerals owned by the federal government (or “federal

mineral estate”) to oil and gas operators for development. *See W. Energy Alliance v. Salazar*, 709 F.3d 1040, 1044 (10th Cir. 2013). “BLM state offices administer these leases through lease sales”—usually competitive, quarterly auctions that award parcels to the highest bidder. *Id.* at 1042; 30 U.S.C. § 226(b)(1). Where another federal agency manages the lands containing the oil and gas deposit, the surface-management agency must “consent” to the leasing before the lands can be leased. *See* 30 U.S.C. § 352.¹

USFS must identify which lands under its jurisdiction are available for oil and gas leasing, in accordance with its land and resource management planning regulations and NEPA. 36 C.F.R. § 228.102(c). Here, the 2006 Forest Plan designated all lands in the Forest available for leasing. FS-9308. When oil and gas operators submit “expressions of interest” to BLM nominating certain parcels for leasing, 43 C.F.R. § 3120.1-1, BLM seeks USFS’s consent for those parcels before offering them in a lease auction. *See* FS-5530; BLM-45506.

Before USFS can consent to leasing of specific parcels it must “[v]erify that oil and gas leasing of the specific lands has been adequately addressed in a NEPA document, and is consistent with the Forest land and resource management plan.” 36 C.F.R. § 228.102(e). “[I]f there is significant new information or circumstances” requiring further environmental analysis—the same criterion for preparation of an SEIS under NEPA’s implementing regulation, 40 C.F.R. § 1502.9—USFS must perform “additional environmental analysis” before it can consent to leasing of specific parcels. *See id.*

FACTUAL BACKGROUND

A. The Wayne National Forest and Its Resources

The Wayne National Forest is Ohio’s only national forest, beloved for its lush and rugged landscape, many headwater streams, craggy rock outcroppings, picturesque covered bridges, and abundant wildlife. *See, e.g.*, BLM-1403, 30883, 31217-19, 31225, 31309, 7422, 7710; *see also* n.2 below. Located in the foothills of the Appalachian Mountains in southeast Ohio, the Wayne

¹ The Mineral Leasing Act for Acquired Lands, 30 U.S.C. § 351 *et seq.*, extended the MLA’s provisions to “acquired lands,” 30 U.S.C. § 351, *i.e.*, those acquired by the U.S. from a state or private party.” *Wallis v. Pan Am. Petroleum*, 384 U.S. 63, 65 n.2 (1966). All Wayne National Forest lands are acquired lands. FS-9557. Thus, USFS’s “consent” to their leasing is required under 30 U.S.C. § 352. *See id.*

1 National Forest is one of the few public forests in this state; public forests make up only 1.5% of
2 Ohio's land. BLM-30870; Dkt. 49 ¶ 47 (Fed. Defs.' Answer). Within only a few hours' driving
3 distance of Columbus, Cleveland, and Cincinnati, the Forest provides a wide array of
4 recreational opportunities to Ohio residents and out-of-state visitors. *Id.* Hundreds of thousands
5 of people visit the Forest each year for hiking, camping, canoeing, wildlife viewing, bird
6 watching, and mushroom gathering, among other activities. *Id.* The Forest consists of hardwood
7 forest dominated by oak-hickory stands. FS-9349. Its landscape "is highly dissected by rolling
8 hills, striking rock bluffs and shelters, and caves of sandstone and shale." BLM-1403.

9 The Forest is divided into three non-contiguous units—Athens, Ironton, and Marietta. FS-
10 9251. Its administrative boundary contains approximately 834,000 acres of private and federal
11 land spanning twelve counties. *See id.*; FS-5534. The Marietta Unit is the Forest's easternmost
12 unit, consisting of approximately 268,000 acres of private and federal lands within its
13 administrative boundary, and located within Noble, Washington, and Monroe counties. BLM-
14 1388; FS-9251. The Ohio River flows along its southern and eastern edges. *See* BLM-1475.

15 The Forest is a patchwork of private and federal land: over three-quarters of lands within
16 the Marietta Unit's administrative boundary are privately owned. *See* BLM-1388, 1534. Small
17 towns and communities lie within this area. *See* FS-3740, BLM-45306. Still, the Marietta Unit is
18 not heavily developed. Its character is largely rural and rustic: homes, farms, pastures, schools,
19 cemeteries, and houses of worship are scattered throughout. *See id.*; BLM-1403, 1404. Historic
20 barns, log structures, iron furnaces, and covered bridges dot the landscape. BLM-1403.

21 The Forest exhibits rich biodiversity: it is home to 90 species of fish, 59 amphibian and
22 reptile species, 50 species of mammals, 158 bird species, countless invertebrates, and over 2,000
23 tree and plant species. FS-9300; Dkt. 49 ¶ 49; *see also* FS-10746, 10776 (central Appalachian
24 forests among most biologically diverse). Many of these plant and wildlife species depend on
25 large unbroken tracts of mature forest known as "interior forest habitat." FS-9377-78, BLM-
26 1376. Interior forest that has not been fragmented by roads or other development also provides
27 high-quality habitat for certain sensitive species. FS-9378. Larger tracts provide a larger buffer
28 from forest edges, which can expose species to warmer or windier conditions, increased

1 predation, parasitism, and competition. BLM-1428, 10294. Fragmentation also isolates species
2 from potential mates. *See* FS-10773.

3 For example, the cerulean warbler and Indiana bat—both rare and sensitive species found
4 in the Marietta Unit, BLM-1379, 1381—depend on interior forest habitat, and are generally
5 found in oak-hickory stands. FS-9377-78, 9348, 9818. The cerulean warbler is a rare migratory
6 songbird that winters in tropical areas, and nests and breeds within the canopy of mature interior
7 forest in Appalachia. BLM-30849; FS-9377-78, 10778. USFS has designated it a “Regional
8 Forester sensitive species,” and considers it of “highest conservation priority.” *Id.*; FS-9377-78.
9 The Indiana bat is listed as “endangered” under the ESA. 32 Fed. Reg. 4001 (March 11, 1967);
10 BLM-1378. The bat favors roosting under the sloughing bark of mature oak or hickory trees to
11 raise its pups. FS-9348, 9818. It prefers interior forest for maternal roosting habitat, particularly
12 during unusually warm or inclement weather—conditions that climate change is likely to
13 exacerbate. FS-9428, 9818, 10813, 10816-18. Other sensitive wildlife in the Marietta Unit that
14 depend on this habitat include black bear, tri-colored bat, little brown bat, and the ESA-listed
15 Northern long-eared bat. BLM-1381; FS-5584, 9285-86, 10656, 15254.

16 The Little Muskingum River winds 57 miles through the Forest, ending at the Ohio River
17 near Marietta, Ohio. FS-9688; BLM-1476. The vast majority of the Marietta Unit is contained
18 within this watershed. BLM-1389-90. The only Forest waterway deemed an “outstanding
19 resource water” by USFS, it is considered “eco-regionally significant.” FS-9688, 9771. USFS
20 manages it for non-motorized recreation, such as canoeing and fishing, and as a “scenic byway.”
21 FS-9691, 10435; BLM-1402. Ohio Environmental Protection Agency has designated it
22 “Exceptional Warmwater Habitat.” FS-10217. “By far, the Little Muskingum River has the
23 highest number of aquatic species-at-risk, and the highest diversity of fish and mussel species of
24 all streams flowing through the Forest.” FS-10423. These species include river otter, Eastern
25 sand darter, redbreast dace, Eastern hellbender, and Ohio lamprey. FS-10137, 10144-45, BLM-
26 1381-82. Critical to maintaining aquatic biodiversity in the river is not just protecting the
27 mainstem, but also the “entire drainage network that begins in the headwaters.” *See* FS-9785.

28 **B. Horizontal Drilling and Fracking in the Utica Shale**

1 The Wayne National Forest lies atop the Utica shale—a geological formation located
2 thousands of feet below the earth’s surface that contain oil and gas trapped in minute pores in the
3 rock. FS-3744; BLM-1387-88, 29003-04. When the 2006 Forest Plan was adopted, these shale
4 formations were not considered viable oil and gas sources due to their low permeability, which
5 inhibited the flow of oil and gas. *See id.*; BLM-1387. Since then, “advances in horizontal drilling
6 and hydraulic fracturing methods have enabled the production of oil, natural gas, and gas
7 liquids...from these reservoirs in paying quantities.” *Id.*; BLM-29005.

8 Horizontal drilling involves first drilling down and then horizontally sideways for over a
9 mile. BLM-29005; FS-3853-54, 5180. Hydraulic fracturing or “fracking” involves the injection
10 of millions of gallons of toxic fluid underground, under high pressure, to produce fractures that
11 release oil and gas trapped in the shale rock. BLM-29004, 29006; FS-4244, 5094. Fracking in
12 multiple stages along the horizontal section of the borehole exposes more of the shale formation
13 to fractures, which allows greater volumes of oil or gas to be released. BLM-29005; FS-3853.

14 Fracturing fluid (or “frack fluid”) contains a “proppant,” typically sand, that becomes
15 wedged in the fractures and holds them open so that passages remain after pressure is relieved.
16 BLM-29004. In addition, a mixture of chemicals is used to increase the viscosity of the fluid,
17 keep proppants suspended, and impede bacterial growth and mineral deposition. BLM-29006-07,
18 FS-3848-49, 15743; Dkt. 49 ¶ 64. Fracking a single well can require thousands of tons of sand,
19 thousands of gallons of chemicals, and millions of gallons of water. BLM-29006; FS-4245; Dkt.
20 49 ¶ 65. Large quantities of water are also needed to drill the well deep underground and
21 horizontally. BLM-29006. This enormous water use results in millions of gallons of wastewater
22 that returns to the surface, which must be stored, transported, and disposed of. BLM-29006.
23 These wastewaters often contain heavy metals, radionuclides significantly exceeding drinking-
24 water standards, and fracking chemicals. BLM-29007; FS-4245, 4365, 15653-55.

25 The high volumes of chemicals and water necessary for fracking operations, and the high
26 volumes of oil, gas, and wastewater produced, require larger-scale infrastructure and
27 equipment—*e.g.*, larger well pads, pipelines, tanks, and impoundments—than is required for
28 conventional oil and gas development. *See* BLM-29006, 61687; FS-4281; FS-3881, 3883, 3887,

1 5181 (photos). In addition to causing greater land disturbance at each well site, fracking
2 operations also release more air pollution harmful to human health, including 200 times more
3 volatile organic compounds than conventional operations during well completions. FS-4001. Air
4 pollution is emitted at every stage of oil and gas development, including construction, drilling,
5 well completion (or fracking), and oil and gas production, as well as transportation of materials,
6 equipment, waste, and oil and gas to and from the well site. FS-5429-30. Emissions sources
7 include construction equipment, haul trucks, dust from dirt roads and construction sites, storage
8 tanks or pits, pipelines, drilling rigs, gas compressor stations, and wellheads. *See id.*; FS-15657

9 **C. Oil and Gas Leasing in the Wayne National Forest**

10 Historically, the Utica shale was not a main target formation for oil and gas development.
11 But reports in early 2011 that it contained quantities of gas that could potentially be profitably
12 extracted via horizontal drilling spurred oil and gas operators' interest in developing this
13 formation, including in southeast Ohio. *See* FS-5528-29. Subsequently, BLM's proposed
14 December 2011 auction of oil and gas lease parcels in the Forest led to "an outpouring of public
15 concern" regarding horizontal drilling in the Forest. FS-5529. As a result, USFS withdrew its
16 consent to leasing the parcels pending a review of the effects of horizontal drilling, and BLM
17 removed them from the auction. *Id.*

18 In 2012, USFS prepared a "Supplemental Information Report" (2012 SIR) to determine
19 whether the potential for horizontal drilling and fracking in the Forest warranted a supplement to
20 USFS's existing environmental analysis of oil and gas development in the Forest, and/or
21 amendment of the Forest's land and resource management plan, which had last been updated in
22 2006 (2006 Forest Plan). FS-5532-33. The 2012 SIR purported to review whether the effects of
23 these new activities, which had not been contemplated in the prior environmental review,
24 "presented a seriously different picture" than previously analyzed in the 2006 Forest Plan EIS.
25 *Id.* The 2012 SIR, which was not a NEPA document, concluded that fracking and horizontal
26 drilling in the Forest would not result in any "overall effects" that were not already disclosed in
27 the 2006 Forest Plan EIS. *See* FS-5611-12.

28 This conclusion was based, in part, on a May 3, 2012 letter from BLM to USFS

1 projecting that 13 horizontal well pads, including ten in the Marietta Unit, with up to eight wells
2 each, would be developed on federal land in the Forest. FS-5641-42. The letter stated that total
3 surface disturbance from developing those horizontal well pads would not exceed the 2006
4 Forest Plan EIS's projections for the amount of acreage to be disturbed by oil and gas
5 development in the Forest. FS-5641-42. In addition, USFS solicited FWS's opinion as to whether
6 reinitiation of consultation on a 2005 Biological Opinion regarding the effects of implementing
7 the 2006 Forest Plan, including oil and gas activities allowed under the plan, was required under
8 the ESA. In a June 18, 2012 letter, FWS concurred in USFS's determination that it was not
9 required. FS-5717-18.

10 On August 27, 2012, the Forest Supervisor made findings, based upon the 2012 SIR, that
11 "there is neither the need to supplement the EIS prepared for the [2006 Forest Plan], nor the need
12 to correct or amend the Forest Plan at this time." FS-14893, 5724. Despite the high level of
13 public interest in the effects of fracking on the Forest's resources—and controversy over these
14 impacts, *see, e.g.*, FS-2915, 2924, 15901, 15972-16066—the 2012 SIR and related findings were
15 not subject to formal public review and comment.

16 In November 2015, BLM again proposed to allow oil and gas leasing in the Forest and
17 initiated "scoping"—a process for the public to identify issues BLM should consider in an
18 environmental analysis of its proposal. BLM-1350. BLM received roughly 3,400 scoping
19 comments from the public, many of which raised concerns about the potential for fracking to
20 degrade wildlife habitat, harm streams, and pollute the air. BLM-1351, 30867-31366.

21 BLM released a draft Environmental Assessment for its leasing proposal ("Draft EA") for
22 public comment in April 2016. BLM-25714. The Draft EA proposed to make available all of the
23 acreage in the Marietta Unit open to leasing under the 2006 Forest Plan, or approximately 40,000
24 acres of federal mineral estate. BLM-25732. By that time, approximately 18,000 acres in the
25 Marietta Unit—nearly half of that unit's estimated acreage of federal minerals—had been
26 nominated for leasing by oil and gas operators. *Id.* BLM received over 14,000 comment letters
27 from the public on the Draft EA, many opposed to allowing fracking in the Forest's Marietta
28 Unit. BLM-1352, 2506-5606, 5607-5627, 6214-6345. Plaintiffs submitted comments on the

1 Draft EA, and raised concerns that it failed to adequately consider, among other things: (1) the
2 potential for increased surface disturbance associated with Utica shale horizontal drilling and oil
3 and gas infrastructure; (2) the potential for new leasing to result in private surface development,
4 with concomitant impacts on Indiana bat habitat and Forest streams; and (3) air pollution impacts
5 of horizontal drilling and fracking. *See* BLM-51255-51288. Plaintiffs also urged BLM to
6 reinstitute ESA Section 7 consultation on the 2006 Forest Plan, because the 2005 Biological
7 Opinion concerning the effects of Plan implementation, including oil and gas development in the
8 Forest, did not consider the impacts of horizontal drilling on the Indiana bat. BLM-51302-05.

9 On June 15, 2016, before the Draft EA was finalized, USFS authorized BLM to offer
10 specific Forest parcels for oil and gas leasing. FS-14893, 14946, 14960, 14974, 14988. In
11 “[v]erify[ing] that oil and gas leasing of the specific lands has been adequately addressed in a
12 NEPA document,” 36 C.F.R. § 228.102(e), USFS’s consent for BLM’s proposed leasing relied
13 on the 2006 Forest Plan EIS. *See, e.g.*, FS-14893 (“In processing these specific lands for leasing,
14 we verified the leasing of these tracts was adequately analyzed in the [2006 Forest Plan EIS].”).
15 This verification finding also noted that USFS’s determination was supported by “a review of
16 new information in 2012,” referring to the 2012 SIR. *Id.*

17 On October 17, 2016, BLM approved the proposal to make 40,000 acres of federal oil
18 and gas minerals in the Marietta Unit available for oil and gas leasing, by issuing a Final EA and
19 Finding of No Significant Impact (FONSI). *See* BLM-1750, 1754. The FONSI found that leasing
20 up to 40,000 acres of federal mineral estate within the Marietta Unit “is not a major Federal
21 action” and “will not significantly affect the quality of the human environment.” BLM-1754.
22 That same day, BLM posted notice of an oil and gas lease auction scheduled for December 13,
23 2016, including parcels in the Forest that USFS had consented to leasing. BLM-1203, 1217-26.
24 BLM offered 17 parcels in the Forest, totaling 679.48 acres. BLM-284. The sale notice initiated
25 a 30-day formal administrative protest period. BLM-1213. BLM received over 100 protests of
26 the lease auction, *see* 43 C.F.R. § 3120.1-3, including one from Plaintiffs, but denied or
27 dismissed all of them. BLM-289, 332. On December 12, 2016, BLM issued a Decision Notice
28 authorizing the auction. BLM-286. All 17 parcels were leased. BLM-284.

On January 13, 2017, BLM posted notice of a March 23, 2017 lease auction offering additional parcels in the Forest that USFS had consented to leasing. BLM-253, 265-273. Twenty parcels totaling 1,147.10 acres were offered. BLM-1. BLM received 78 formal protests opposing the auction, including Plaintiffs' protest, and again denied or dismissed all of them. BLM-8, 26. All 20 parcels were leased. BLM-1.

STANDARD OF REVIEW

In a challenge to final agency action under the Administrative Procedure Act (APA), "where the court asks whether an administrative decision is proper in light of an established record," summary judgment is appropriate. *See Sierra Club v. U. S. Fish & Wildlife Serv.*, 189 F. Supp. 2d 684, 690 (W.D. Mich. 2002) (citing *Fla. Fruit & Vegetable Ass'n. v. Brock*, 771 F.2d 1455, 1459 (11th Cir. 1985)); *see also Wachovia Bank, N.A. v. Watters*, 431 F.3d 556, 558-59 (6th Cir. 2005) (summary judgment proper where only legal issues are before court). The standard for summary judgment review set forth in Federal Rule of Procedure Rule 56(c) does not apply to APA actions, given the court's limited role in reviewing the administrative record. *Sierra Club v. Mainella*, 459 F. Supp. 2d 76, 89 (D.D.C. 2006). Review of agency decisions, including decisions whether to perform additional environmental analysis under NEPA, are reviewed under the APA's "arbitrary and capricious standard." *See City of Detroit*, 329 F.3d at 526; 5 U.S.C. § 706. Agency action is arbitrary and capricious if

the agency has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise.

Meister v. U.S. Dep't of Agric., 623 F.3d 363, 371 (6th Cir. 2010) (quoting *Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983)).

NEPA employs a "set of 'action-forcing' procedures that require agencies to take a 'hard look at environmental consequences.'" *Ky. Riverkeeper, Inc. v. Rowlette*, 714 F.3d 402, 407 (6th Cir. 2013) (citations omitted). These procedures "demand strict compliance." *City of Detroit*, 329 F.3d at 528. In the context of examining whether new information gives rise to the need to

1 prepare a supplemental EIS, an agency must take a “hard look at the proffered evidence.” *Marsh*
 2 *v. Oregon Natural Res. Council*, 490 U.S. 360, 385 (1989). *Marsh* explained the court’s
 3 “searching and careful” review in determining whether the agency took a hard look:

4 [C]ourts should not automatically defer to the agency’s express reliance on an
 5 interest in finality without carefully reviewing the record and satisfying
 6 themselves that the agency has made a *reasoned decision* based on its evaluation
 7 of the significance—or lack of significance—of the new information. A contrary
 approach would not simply render judicial review generally meaningless, but
 would be contrary to the demand that courts ensure that agency decisions are
 founded on a reasoned evaluation “of the relevant factors.”

8 *Marsh*, 490 U.S. at 378. *See also Nat’l Audubon Soc’y v. Dep’t of the Navy*, 422 F.3d 174, 187
 9 (4th Cir. 2005) (“The hallmarks of a ‘hard look’ are thorough investigation into environmental
 10 impacts and forthright acknowledgment of potential environmental harms.”).

11 Similarly, with respect to a proposed action for which an agency has not prepared an EIS
 12 in the first instance, “meaningful analysis” of and “public comment” on the proposed action’s
 13 effects is required. *See Northwoods Wilderness Recovery v. U.S. Forest Service*, 323 F.3d 405,
 14 412 (6th Cir. 2002). “A court must look beyond the conclusory statements in an EA and examine
 15 whether the agency has provided a ‘convincing statement of reasons why potential effects are
 16 insignificant.’” *Hirt v. Richardson*, 127 F. Supp. 2d 833, 839 (W.D. Mich. 1999) (citation
 17 omitted); *see also Sierra Club v. Peterson*, 717 F.2d 1409, 1413 (D.C. Cir. 1983) (agency must
 18 “identif[y] the relevant areas of environmental concern” and make “convincing case that the
 19 impact [is] insignificant”). “This account proves crucial to evaluating whether [the agency] took
 20 the requisite ‘hard look’ at the potential impact of the [proposed action].” *Ocean Advocates v.*
 21 *U.S. Army Corps of Eng’rs*, 402 F.3d 846, 864 (9th Cir. 2004).

22 Courts “have a duty to set aside the agency’s action when it eschews its NEPA obligation
 23 to ‘adequately consider and disclose the environmental impact of its actions,’” or “fails to
 24 comply with the NEPA regulations’ requirements.” *Ky. Riverkeeper*, 714 F.3d at 411 (citing
 25 *Baltimore Gas*, 462 U.S. at 97-98) (internal alterations omitted). Courts “may not supply a
 26 reasoned basis for the agency’s action that the agency itself has not given.” *Id.* at 413.

27 Review of whether an agency decision complies with the ESA is also reviewed under the
 28

1 APA's arbitrary and capricious standard. *Pub. Emples. for Env'tl. Responsibility v. Hopper*, 827
2 F.3d 1077, 1081 (D.C. Cir. 2016).

3 ARGUMENT

4 I. Plaintiffs Have Standing to Challenge USFS's and BLM's Leasing Decisions

5 To establish standing, Plaintiffs must show: (1) injury in fact, (2) a causal relationship
6 between the injury and the challenged conduct, and (3) that a favorable decision is likely to
7 redress the injury. *Friends of the Earth v. Laidlaw*, 528 U.S. 167, 180-81 (2000). Further, "[a]n
8 association has standing to bring suit on behalf of its members when its members would
9 otherwise have standing to sue in their own right, the interests at stake are germane to the
10 organization's purpose, and neither the claim asserted nor the relief requested requires the
11 participation of individual members in the lawsuit." *Id.*

12 Plaintiffs' members would suffer an injury in fact caused by the challenged approvals,
13 because they (1) regularly use and enjoy specific areas in the Forest for aesthetic, recreational,
14 scientific, educational, and spiritual pursuits; and (2) USFS's and BLM's "uninformed
15 decisionmaking" under NEPA and the ESA threaten these interests with "increased risk of
16 environmental harm."² *Sierra Club v. U.S. Army Corps of Eng'rs*, 446 F.3d 808, 816 (8th Cir.
17 2006). A favorable decision would redress this injury by setting aside the approvals and
18 requiring additional environmental analysis, which could lead to a different decision. *See Klein v.*
19 *U.S. DOE*, 753 F.3d 576, 586 (6th Cir. 2014) (Stranch, J. concurring) (litigant "vested with a
20 procedural right... has standing if there is some possibility that the requested relief will prompt
21 the injury-causing party to reconsider the decision that allegedly harmed the litigant" (quoting
22 *Mass. v. EPA*, 549 U.S. 547, 516 (2007))).

23
24 ² See Decl. of Richard Sidwell ¶¶ 11-57; Decl. of Joe Hazelbaker ¶¶ 7-34; Decl. of Kari McGee ¶¶ 4-15;
25 Decl. of Jill Hunkler ¶¶ 5-16; Decl. of Bonie Bolen ¶¶ 8-41; Decl. of Kevin Peterca ¶¶ 6-12; Decl. of Alex
26 Ferrato ¶¶ 8-21; Decl. of Rebecca Pollard ¶¶ 7-14. These members' recreational and other interests in the
27 Forest are germane to the Plaintiffs' organizational purposes, such that Plaintiffs may bring suit on their
28 behalf. See Decl. of Taylor McKinnon ¶¶ 9-11, 14-17; Decl. of Joe Hazelbaker ¶¶ 2-4; Decl. of Jill
Hunkler ¶ 3; Decl. of Kevin Peterca ¶ 2; BLM-50190-92. These interests also fall within NEPA's and the
ESA's environmental protection purposes and therefore meet the zone of interests test. See *Winchester
Coal. for Responsible Dev. v. U.S. HUD*, 999 F. Supp. 1058, 1061 (S.D. Ohio 1998) (observing this
requirement is applied in "broad permissive manner").

1 **II. BLM's and USFS's Approvals of Oil and Gas Leasing Violated NEPA**

2 USFS's 2006 Forest Plan EIS, pre-dating the interest in horizontal drilling and fracking in
3 the Forest, did not anticipate, disclose, or analyze the effects of such operations and techniques.
4 As a result, USFS has never taken a "hard look" in a NEPA analysis at several major aspects of
5 federal oil and gas leasing in the Forest that would inform both the public and its own choice of
6 alternatives. The issues that USFS has never meaningfully considered include: the effects of
7 clearing larger areas of forest for oil and gas infrastructure, such as larger pipelines; the
8 expansion of fracking activities onto private lands within the national forest; the destruction of
9 Indiana bat habitat, including maternal roost trees; the depletion of massive amounts of water
10 from streams for fracking operations; and the impacts of increased air pollution.

11 While the 2012 SIR purported to analyze whether horizontal drilling and fracking raised
12 any "significant new information" presenting a "seriously different picture" of oil and gas
13 leasing and development in the Forest that would require a supplement to the 2006 Forest Plan
14 EIS, FS-5528, the SIR was not subject to NEPA procedures (FS-5533), and thus cannot fulfill
15 NEPA's requirement to publicly disclose significant environmental effects and allow opportunity
16 for public comment. *See Idaho Sporting Congress*, 222 F.3d at 565-66; *see also Grazing Fields*
17 *Farm v. Goldschmidt*, 626 F.2d 1068, 1072 (1st Cir. 1980) ("studies or memoranda contained in
18 the administrative record, but not incorporated in anyway into an EIS" cannot "bring into
19 compliance with NEPA an EIS that is by itself inadequate"). And substantively, in support of its
20 determination that an SEIS was not required, the 2012 SIR falls far short of providing a "hard
21 look" at new information regarding horizontal drilling and fracking. *Marsh*, 490 U.S. at 385.
22 BLM's 2016 EA also failed to adequately analyze these issues. As a result, (1) USFS's findings
23 regarding the adequacy of the 2006 Forest Plan EIS and BLM's FONSI are arbitrary and
24 capricious; and (2) USFS and BLM failed in their respective duties to prepare an SEIS and EIS.

25 **A. USFS and BLM Failed to Take a Hard Look at the Impacts of Forest Loss** 26 **from Horizontal Well Development**

27 USFS and BLM failed to take a hard look at the entire footprint of horizontal well
28 development in the Forest's Marietta Unit, which undermined the agencies' analysis of the

1 indirect and cumulative effects of oil and gas leasing. *See* 40 C.F.R. § 1508.8 (“effects” or
 2 “impacts” “includes ecological..., aesthetic, historic, cultural, economic, social, or health,
 3 whether direct, indirect, or cumulative.”). Indirect effects are “caused by the action and are later
 4 in time or farther removed in distance, but are still reasonably foreseeable.” 40 C.F.R. § 1508.8.
 5 A cumulative impact “is the impact on the environment which results from the incremental
 6 impact of the action when added to other past, present, and reasonably future actions.” 40 C.F.R.
 7 § 1508.7. “Cumulative impacts can result from individually minor but collectively significant
 8 actions taking place over a period of time.” *Id.*

9 The fundamental problem with the agencies’ analysis is that it fails to grapple with the
 10 basic fact that modern horizontal drilling techniques require operators to clear more land than do
 11 older “conventional” drilling methods, resulting in more forest fragmentation and habitat loss.
 12 *Compare* FS-3281 (vertical well site involves clearing up to 1.1 acres per site) *with* BLM-54564
 13 (one horizontal well site involves clearing 28 acres) *and* FS-2966-67. This is because larger-scale
 14 infrastructure and staging areas for equipment are needed to support multiple wells concentrated
 15 at a single well pad site, and to store and transport the larger volumes of water, chemicals,
 16 wastes, and oil and gas used or produced in the fracking process. *See* FS-2965-70, BLM-61687-
 17 88, 31216. Most significantly, horizontal well development is characterized by the construction
 18 of an extensive network of large-diameter gathering pipelines, FS-2965-67, BLM-60183, but the
 19 agencies failed to disclose or analyze impacts from these gathering lines.

20 An honest assessment of the amount of forest that could be lost, both at the well site and
 21 at a landscape scale, is critical to understanding impacts on wildlife habitat, soil, vegetation,
 22 water quality, scenic values, and air quality. BLM-1413, 1433, 1435, 1436, 1446. For example,
 23 “[i]n a mature interior forest, the loss of a few acres of canopy can result in the loss of suitability
 24 of hundreds of acres of habitat for a wildlife species, such as the cerulean warbler, that depends
 25 on the presence of large blocks of unbroken forest.” BLM-1430; *see also* FS-10144.
 26 Fragmentation of the forest into smaller patches results in degradation and loss of interior forest
 27 habitat, creating less unsuitable habitat “edges” that this species avoids. FS-9440-41, 9488-89,
 28 9395, BLM-30270, 30259. And an expansive clearing at an individual site can degrade or

1 destroy habitat where a small or narrow clearing (such as for a one-lane road or hiking trail)
 2 would not. *See* FS-9489 (abundance of interior forest birds like cerulean warbler reduced along
 3 roads greater than 24 feet in width); FS-9846 (“narrow and linear” clearings—5 to 22 feet in
 4 width—have minimal impact on Indiana bat). This is because for smaller clearings, forest
 5 canopy would likely still cover the clearing, FS-9846, 9853, providing the shade, humidity,
 6 and/or cover from predators that sensitive interior forest species need. BLM-60188-89; *see also*
 7 FS-9846 (Indiana bat forages more along narrow roads covered by forest canopy). The
 8 clearcutting of larger blocks of forest at a single well site can also pose greater sedimentation
 9 risks to streams and aquatic habitat, particularly in steeper areas and during heavy rains. BLM-
 10 30922, 30992, 60188-89.

11 USFS’s 2012 SIR and BLM’s 2016 EA greatly underestimate the acreage that would be
 12 cleared at a typical horizontal well site, and cumulatively throughout the Forest. The agencies
 13 narrowly constrain their analysis to forest destruction for well pad and access road construction.
 14 Without any reasoned explanation, they neglect to consider the full scope of ground-disturbing
 15 activities involved in horizontal drilling, including construction of pipelines, water
 16 impoundments, and staging areas. Consequently, the agencies failed to adequately disclose and
 17 consider impacts from surface disturbance and interior forest habitat degradation and loss.

18 **1. USFS Failed to Take a Hard Look at All Forest Clearing Activities**

19 In 2012, BLM estimated the total forest acreage that could be cleared by horizontal well
 20 development. USFS had requested this estimate to inform its analysis as to whether oil and gas
 21 leasing for this type of development would result in impacts more severe or of a different nature
 22 than what it had previously analyzed in the 2006 Forest Plan EIS. FS-5641. In a May 3, 2012
 23 letter to USFS, BLM responded that a total of 10 horizontal well pads could be developed in the
 24 Marietta Unit, which would result in up to 55 acres of surface disturbance, or 3 to 5.5 acres per
 25 well pad.³ *See* FS-5641-42. Emails between USFS and BLM show that this figure represented 3
 26 to 5 acres for the well pad and 0.5 acres for access roads. FS-2170.

27 _____
 28 ³ While the final product was a letter from BLM to USFS, the letter was a collaborative effort between the
 two agencies. *See, e.g.*, FS-1836, 1858, 2113, 2167.

1 BLM's letter compared these figures to the surface disturbance projections in the
 2 Reasonably Foreseeable Development Scenario for the 2006 Forest Plan EIS (2006 RFDS). The
 3 2006 RFDS had projected a total of 272 acres in the entire Forest would be cleared for vertical
 4 well development, including 135 acres in the Marietta Unit. FS-5626. Because the surface
 5 disturbance estimate for horizontal well development was "well within" the 2006 RFDS's
 6 projections for vertical well development, BLM concluded that "the 2006 RFDS is still
 7 applicable and does not need to be revised." FS-5643. But unlike its later projections for
 8 horizontal wells, the 135-acre figure for vertical wells was not limited to well pads and roads.
 9 Rather, BLM stated in its 2016 EA that the projections in the 2006 RFDS included "*all* acreage
 10 potentially affected" by oil and gas activities, including "road construction, well pad
 11 construction, construction of turnaround/production facility areas, pipelines, and other related
 12 activities." BLM-1355. USFS and BLM failed, however, to include estimates for all of the
 13 aforementioned categories of disturbance in the 2012 SIR and 2012 letter.

14 USFS placed great weight on the 2012 projection figures to support its determination that
 15 an SEIS was unnecessary. It considered the 2006 RFDS's projections to be "upper limits" of
 16 disturbance under the Forest Plan. FS-5577. Former Forest Supervisor Anne Carey recognized in
 17 her 2012 findings supporting this determination that these limits were critical to understanding
 18 the 2006 Forest Plan's impacts on wildlife and vegetation: "It is unlikely that...drilling
 19 disturbance will exceed the acreage envisioned in the existing [2006 Forest Plan EIS]. *This is*
 20 *important*, since the biological documents for the Forest Plan...considered the effects of oil and
 21 gas activities on wildlife and plant resources *up to the projected acres* [in the 2006 RFDS]." FS-5725 (emphases added); *see also* FS-5591 (2012 SIR: horizontal drilling "might create
 22 effects...not covered under the current Forest Plan...if the total acreage likely to be impacted is
 23 greater than what was analyzed (i.e., cumulative effects) [in the 2006 Forest Plan EIS]").

24
 25 Given the importance USFS placed on the *total* potential acreage that could be disturbed
 26 throughout the Forest, and the fact that BLM had quantified all such acreage for vertical well
 27 development for the 2006 Forest Plan, BLM and USFS's decision to limit the 2012 horizontal
 28 well analysis to well pads and access roads (to the exclusion of all other infrastructure and

1 ground disturbance required for horizontal drilling operations) resulted in a skewed comparison.
2 The omission of several major categories of land disturbance renders the agencies' assessment
3 arbitrary and capricious.

4 First and foremost, USFS was aware of oil and gas operators' need for pipelines or
5 "gathering lines" to transport gas from wells to compressor stations or other collection points.
6 See FS-3830-31(Ohio Department of Natural Resources (ODNR) 2012 presentation to USFS
7 noting this); FS-6465, 6467 (meeting notes stating Ohio drillers "will need...pipelines"; "current
8 pipeline structure is for handling dry gas, new product likely to come out of Utica is wet gas";
9 and "[p]ossible special use requests would come to the WNF for pipelines"). In USFS's
10 correspondence with BLM regarding BLM's updates to its surface disturbance projections for
11 horizontal well sites, USFS asked "for pipelines, what size pipes are we talking and what is the
12 typical clearing width?" FS-1858. This question was a critical one, but there is no indication that
13 BLM ever responded, or that USFS looked into it further.

14 Plaintiffs' unsolicited letter to USFS during the preparation of the 2012 SIR noted the
15 potential for large areas of disturbance from pipelines. Specifically, new pipeline infrastructure
16 for shale gas fields range from 6 to 24 inches in diameter, and "are much larger than gathering
17 lines used in shallow [*i.e.*, conventional] gas fields, which generally range from 2 to 6 inches in
18 diameter." FS-2966-67 (citing BLM-60183); FS-4281 (report citing U.S. Government
19 Accountability Office's finding that "extraction of oil and natural gas from shale deposits is
20 resulting in the development of new gathering pipelines, some of which are larger in diameter
21 and operate at higher pressure than older pipelines"); *see also* Motion to Take Judicial Notice,
22 Ex. A at 20724 (due to increased gas demand "some gathering lines are being constructed with
23 diameters equal to or larger than typical transmission lines"); *id.* at 20728 (producers using
24 pipelines up to 36-inches in diameter, "far exceeding historical design of typical gathering
25 lines"). Accordingly, rights-of-way for shale gas field gathering lines are generally cleared up to
26 a width of 100 feet, but range between 30 to 150 feet. FS-2967 (citing BLM-60186).

27 Plaintiffs noted in their letter research showing that "[e]ach mile of a 100-foot-right-of
28 way directly disturbs...approximately 12 acres...." FS-2967 (citing BLM-60187). Based on

1 empirical data from Marcellus shale gas fields in Pennsylvania, this results in roughly 19.8 acres
 2 of pipeline-related disturbance per well pad. *See id.* (citing BLM-60185, 60187) (12 acres per
 3 mile of gathering line times 1.65 miles of gathering line per well pad equals 19.8 acres). In
 4 addition, each mile of a 100-foot right-of-way creates an additional 72 acres of forest edges,
 5 causing additional indirect habitat loss and degradation *six times* that of the direct habitat loss.
 6 *See id.* citing (BLM-60187). As noted above, certain interior species like the cerulean warbler
 7 avoid edges, resulting in the loss of habitat many times over the forest acreage destroyed.

8 These concerns were noteworthy enough to prompt the Forest Supervisor to ask a staff
 9 member to address them. FS-2977; *see also* FS-3564 (regional USFS office commenting on draft
 10 2012 SIR: “there is nothing here that would respond to [conservation groups’] comment about
 11 pipeline disturbance. Is that covered anywhere?”). The email response, however, glosses over the
 12 core issue of larger pipelines and rights-of-way being needed for shale gas gathering lines:

13 As for the increased disturbance of pipeline corridors ... there is a difference
 14 between transmission lines and gathering lines...there are many gathering lines
 15 above ground, not buried between operations...burial of lines over a certain
 16 diameter are required....small “feeder” lines are typically not buried.

17 FS-2977 (ellipses in original). No further explanation is provided beyond this unintelligible
 18 statement. Indeed, it ignores the main thrust of Plaintiffs’ comment: that gathering lines for shale
 19 gas development can approach the size of cross-country transmission lines, and result in far more
 20 surface disturbance than conventional wells. *See* FS-4281; FS-15523 (observing 100-foot right-
 21 of-ways for pipelines in West Virginia).

22 The agencies failed to undertake a more concrete comparison supported with real-world
 23 data or reasonable estimates specific to horizontal drilling. BLM estimated pipeline disturbance
 24 for vertical wells in the 2006 RFDS, BLM-1355, though inexplicably never disclosed the
 25 specific figures it used. FS-10244, 5531 (providing no breakdown of estimates). This estimate
 26 was likely minor to negligible: at the time, BLM noted that “[g]iven the long history of gas
 27 production in the WNF, there is already a well developed pipeline infrastructure in place which
 28 should minimize the need for lengthy gathering lines to service new wells.” FS-10251. (As
 Plaintiffs pointed out in 2012, this assumption would no longer hold true in the Forest, given the

1 larger pipelines typically used in shale gas fields. *See* FS-2966-67.)

2 In addition, almost contemporaneously with the 2012 SIR, other national forests were
3 projecting pipeline disturbance from horizontal well development for their forest planning. In
4 2011, for West Virginia's Monongahela National Forest, USFS projected 13.5 acres of forest
5 clearing "for access roads and pipelines" for each horizontal well site, assuming "pipeline rights-
6 of-way are an average of 50-feet wide." *See* FS-9. Similarly, in 2011, for Virginia's George
7 Washington National Forest, USFS projected 531 acres of pipeline-related disturbance for 43
8 horizontal well pads in production, or 12.34 acres per producing well pad, assuming a smaller
9 right-of-way of 20 to 30 feet wide. FS-48-49. Thus, BLM and USFS had the ability to project
10 and compare pipeline disturbance from horizontal and vertical wells in the Forest.

11 BLM's May 2012 letter and USFS's 2012 SIR also failed to consider increased surface
12 disturbance from water impoundments and staging areas. Millions of gallons of water would be
13 needed for fracking each shale well, FS-5531, and USFS recognized internally that "water
14 storage and piping...could entail a lot of ground disturbance," FS-2806 – in the range of five to
15 twelve acres for a single impoundment, FS-2660, 2804. *See also* FS-6463 (ODNR informing
16 USFS operators "may create a giant impoundment for fresh water"); FS-310, 306 (permit for
17 fracking wells near Marietta Unit requiring two 7-million gallon ponds).

18 USFS also failed to consider staging areas around the perimeter of the well site, which
19 the record shows are not negligible, in its analysis of surface disturbance impacts. *See* FS-3830
20 (potential "physical" impact from staging areas); FS-2685, 2245 (ODNR recommending ways to
21 limit creation of new sites for staging or storage areas for oil and gas on state lands); FS-2712
22 (ODNR noting need for restoration of staging areas on state lands). These areas are needed to set
23 up and park equipment even after production begins, or to stockpile topsoil and earth removed
24 from cleared areas, which may be reused to reclaim the site. *See* FS-256, 227.

25 That disturbance acreage would purportedly remain below projections in the 2006 Forest
26 Plan EIS was a key factor in USFS's findings that an SEIS was not necessary. *See* p. 19 above.
27 Indeed, authorizing activities that would allow additional forest acreage to be destroyed beyond
28 the "upper limits" (FS-5591) considered in the existing forest plan, without any analysis of the

1 effects in a NEPA document, does not comport with NEPA. *See Northwoods Wilderness*
 2 *Recovery*, 323 F.3d at 412 (USFS improperly authorized timber harvesting beyond Forest Plan
 3 limits without “meaningful analysis” of effects and “public comment”). But nothing in the 2012
 4 SIR or in the rest of the record demonstrates that USFS, before authorizing leasing, took a “hard
 5 look” at the likelihood that construction of pipelines, impoundments, and staging areas would
 6 result in exceedance of existing disturbance limits. This failure to take into account the full scope
 7 of surface-disturbing activities not only avoided required analysis of the cumulative, forest-wide
 8 effects of oil and gas leasing, but also of the localized effects of destroying potentially dozens of
 9 acres at each well site, including from pipeline right-of-ways up to 150 feet in width, and the
 10 qualitative difference in effects from such larger clearings. *See* pp. 17-18 above.

11 USFS’s failure to include, let alone analyze, these factors in its surface disturbance
 12 analysis undermines its conclusion that the 2006 Forest Plan EIS is adequate to address the
 13 environmental impacts of horizontal drilling and fracking. *See Lemon v. McHugh*, 668 F. Supp.
 14 2d 133, 142 (D.D.C. 2009) (Army’s finding that proposed project would have same effects as
 15 development plan previously analyzed in EIS was unsupported, as it failed to make “convincing
 16 case” it need not consider project’s higher amount of impervious surface); *Sierra Club v. Marsh*,
 17 714 F. Supp. 539, 570-71 (D. Me. 1989) (record did not show impacts of a larger industrial
 18 complex “were carefully assessed” before agency concluded SEIS was not required).
 19 Accordingly, USFS’s finding that the 2006 Forest Plan EIS is adequate to address the impacts of
 20 oil and gas leasing is arbitrary and capricious.

21 **2. BLM Failed to Take a Hard Look at All Forest Clearing Activities**

22 BLM also relied on the flawed surface disturbance projections for horizontal well
 23 development, and the analysis from the 2012 SIR, for the environmental analysis in its 2016 EA.
 24 BLM-1354, 1427. Beyond that, the EA offers two passing statements on the subject of pipeline
 25 construction, stating only that: (1) “If the well produces natural gas, and the flowline is in the
 26 road, another 0.5 acres may be affected by flowline construction,” BLM-1356, and (2) “If the
 27 well is productive, additional land may be affected by pipeline construction.” BLM-1357. These
 28

1 cursory statements reveal nothing about the amount of disturbance that could occur if pipeline
2 construction is outside the road, or the likelihood of either scenario.

3 By 2016, additional evidence had arisen, which Plaintiffs presented to BLM, that cast
4 further doubt on the assumption that surface disturbance would be less than what was analyzed
5 in the 2006 RFDS. *See* BLM-51260-62. A 2015 aerial photography study of land disturbance
6 from Utica shale drilling in eastern Ohio found pipeline burial disturbed on average 18.3 acres of
7 land per well pad in unglaciated areas. BLM-51811, 51261. Unglaciated areas like the Wayne
8 National Forest are hillier areas left untouched by past glacial activity. FS-9252, 9561; *see also*
9 BLM-59932 (U.S. Geological Survey study of Marcellus shale land disturbance finding pipeline
10 construction “was the source of most of the increase in patch number,” or fragmented forest).
11 The same eastern Ohio study found unglaciated areas had “limits of disturbance,” or cleared land
12 around the well pad used for staging areas, of roughly 4 acres, on average (or 7.36 acres
13 including the well pad). *See* BLM-51811; *see also* BLM-54564 (research showing 28-acre
14 footprint for each horizontal well site in Marcellus shale, including well pad, access road,
15 pipelines, and water storage); BLM-71569⁴ (water impoundments can disturb up to 28 acres).

16 BLM never questioned the reliability of this information. In response to the public’s
17 comments on this issue, it only stated: “Since exact design details are not known at the leasing
18 stage, it is not possible to know exactly what supporting infrastructure would be needed if
19 development occurs in the future, other than acknowledging that *additional surface disturbance*
20 *could occur* (as identified in the EA).” BLM-1511 (emphasis added).

21 This excuse should be rejected. BLM routinely estimates disturbance from pipelines and
22 other infrastructure in its projections for future oil and gas development at the programmatic
23 land-use planning stage—as it did with its 2006 RFDS projections for the Forest. *See* p. 19
24 above; *see also* BLM-58777, 58810 (BLM estimating 17.5 acres of pipeline disturbance per
25 square mile in Colorado field office); BLM-66903 (BLM estimating total disturbance from
26 “pipelines, gas plants, compressor stations and other infrastructure” for another field office).

27 _____
28 ⁴ This citation references “Exhibit G,” an unnumbered document. It can be found in folder no. 22
 (“Exhibits”) of BLM’s record.

Moreover, “the ‘basic thrust’ of NEPA is to require that agencies consider the range of possible environmental effects before resources are committed and the effects are fully known.” *Ctr. for Biological Diversity v. BLM* (“*CBD*”), 937 F. Supp. 2d 1140, 1157 (N.D. Cal. 2013) (citing *City of Davis v. Coleman*, 521 F.2d 661, 676 (9th Cir. 1975)); *see id.* (requiring BLM to project number of horizontal wells that could be developed on proposed leases). “Reasonable forecasting and speculation is thus implicit in NEPA, and [courts] must reject any attempt by agencies to shirk their responsibilities under NEPA by labeling any and all discussion of future environmental effects as ‘crystal ball inquiry.’” *Id.* (citation omitted). In any case, BLM cannot reasonably claim that surface disturbance from horizontal well development will not exceed the 2006 RFDS projections, or that it would have the same effects at individual well sites as vertical well development. BLM only considered a narrow subset of disturbance for horizontal wells, while at the same time admitting “additional surface disturbance could occur” from other construction activities – but without ever thoroughly examining the potential magnitude of that disturbance or its effects.

BLM’s finding that oil and gas leasing would result in “no significant impact” is based in part on the conclusion that “the amount of surface disturbance projected on the [Forest] with the use of high-volume, horizontal fracturing technology is within the amount of surface disturbance analyzed in the [2006 Forest Plan EIS].” BLM-1758. Because this conclusion lacks a factual or reasoned basis, BLM’s FONSI is arbitrary and capricious.

B. USFS and BLM Ignored the Potential for Oil and Gas Activities to Occur on Private Surface

USFS and BLM failed to take a hard look at the indirect and cumulative impacts of increased oil and gas activities on private lands that are enabled by federal leasing. “Indirect effects may include *growth inducing* effects and other effects related to *induced changes in the pattern of land use*, population density, *or growth rate*, and related effects on air and water and other natural systems, including ecosystems.” 40 C.F.R. § 1508.8(b) (emphasis added). Cumulative impacts can result from “reasonably foreseeable future actions *regardless of what agency (Federal or non-Federal) or person undertakes such other actions.*” 40 C.F.R. § 1508.7

(emphasis added). Given the fragmented ownership of the Marietta Unit and the availability of horizontal drilling techniques, which allow wells to be drilled over a mile from the well pad, it is reasonably foreseeable that federal leasing of minerals beneath USFS land would result in the construction of well pads, roads, and pipelines on lands not just directly above leased minerals, but on adjacent or nearby private lands. By not considering this indirect effect of leasing, BLM and USFS underestimated the total number of wells and amount of associated infrastructure that would likely be developed, and thus failed to fully evaluate the effects of oil and gas leasing. Further, this oversight led USFS and BLM to improperly assume that federal requirements in the Forest Plan would mitigate the impacts of *all* horizontal well activities enabled by federal oil and gas leasing, even though private surface activities are not subject to such requirements.

1. USFS Failed to Take a Hard Look at Impacts of Private Land Activities

Shale drilling involves drilling horizontally through areas for more than a mile. BLM-29005; FS-3853. In the Forest, where land ownership is “significantly fragmented,” FS-9328, a single horizontal wellbore is likely to extend through a patchwork of parcels with different owners of the surface and subsurface minerals, including USFS and multiple private parties. FS-3726 (map of minerals). Thus, a horizontal well tapping federal minerals is highly likely to also tap private minerals (below federal or private surface), adjacent to or even over a mile away from the federal minerals. The well pad and other surface facilities, then, would not be constrained to federal land above the federal minerals, but could be sited on private lands as well.

USFS was fully aware of the potential for federal oil and gas wells (i.e., wells accessing federal minerals, or both federal and private minerals) and associated infrastructure to be developed on private lands. *See* FS-3907 (meeting notes reflecting this); FS-3475 (USFS Regional Office asking “how will development rates on private surface be estimated...?”); FS-2806 (USFS staff noting potential for central water storage on private lands). Indeed, leasing of federal land and minerals will almost certainly result in more drilling, fracking and related activity not just on Forest lands, but also on adjacent and interwoven private lands. This is because over three-quarters of the Marietta Unit’s surface is under private ownership, with

1 federally owned forest scattered throughout. BLM-1388, FS-9379; FS-3726, BLM-45306 (maps
 2 showing private and federal ownership). Further, if potential well sites are available on both
 3 private and federal land to develop a horizontal well targeting both private and federal minerals,
 4 an oil and gas operator may prefer to develop on private land because fewer development
 5 restrictions apply. *See* FS-3907 (meeting notes reflecting discussion of where operators would
 6 prefer to drill); FS-3021 (USFS and BLM have less control on private surface).

7 In short, increased well site development on private lands is a predictable, expected, and
 8 reasonably foreseeable effect of federal oil and gas leasing, and NEPA requires disclosure of its
 9 impacts. *See High Country Conservation Advocates v. U.S. Forest Serv.*, 52 F. Supp. 3d 1174,
 10 1187-88 (D. Colo. 2014) (noting coal development on private lands near public lands approved
 11 for lease modification was “a foreseeable indirect impact of the approval”); *cf. Mainella*, 459 F.
 12 Supp. 2d at 105-06 (agency approving drilling beneath preserve should have considered impacts
 13 of well sites on private land outside preserve); *Wyo. Outdoor Council v. U.S. Army Corps of*
 14 *Eng’rs*, 351 F. Supp. 2d 1232, 1245 (D. Wyo. 2005) (“Impacts to private lands should be
 15 considered in determining whether impacts are significant under NEPA.”).

16 The 2006 Forest Plan EIS identifies private surface both within and outside of the Forest
 17 boundary as part of the “area of analysis.” FS-9802 (acknowledging “[d]irect and indirect effects
 18 of activities associated with the Selected Alternative would occur on [USFS] lands, and could
 19 extend off [USFS] lands and onto other ownerships”). But none of the documents supporting
 20 USFS’s consent considered the potential for horizontal well development to occur on private
 21 surface. The 2006 Forest Plan EIS lacks any discussion of the potential for horizontal wells or
 22 associated infrastructure to be located on private surface far away from leased minerals, as it
 23 found horizontal drilling “not yet economically feasible within the WNF.” FS-10248.

24 Likewise, the 2012 SIR, which purported to evaluate whether fracking would result in
 25 impacts any different from those evaluated in the 2006 Forest Plan EIS, did not consider the
 26 private land consequences of federal leasing actions. Critically, the number of well pads
 27 projected in the 2012 SIR only considers the potential for well-pad development on federal land.
 28 FS-5530 (2012 SIR: well site estimate “does not include private surface lands located within the

1 proclamation boundary”). The 2012 SIR does not explain why it need not consider the potential
2 for federal wells and related infrastructure to be developed on both private and federal lands.

3 Given the nature of the Forest’s ownership, the Forest Service cannot shut its eyes to
4 private surface impacts. The failure to consider these indirect effects infects the 2012 SIR in two
5 ways, and undermines USFS’s findings in support of its consent to leasing. First, by overlooking
6 the potential for new well sites on over three-quarters of the Marietta Unit, as well as on
7 privately owned areas outside the Marietta Unit boundary, USFS greatly underestimated the total
8 number of well sites and wells that could be developed. Such projections for private land well
9 sites were entirely feasible; federal agencies routinely analyze the potential for oil and gas
10 development on private land. *See, e.g.*, FS-3950 (1988 Forest Plan estimating number of wells
11 developable on private land and associated disturbance). USFS’s projections for well site
12 development on federal land was based on “two key factors”: (1) “surface topography,” or the
13 number of areas with “relatively flat surfaces that are at least 3.5 acres in size,” and (2) “the
14 extent and continuity of the geologic formations” underlying the Forest (i.e., whether they are
15 thick and large enough to be developed). FS-5642. The record lacks any explanation as to why
16 this analysis could not have included both federal and private lands.

17 With more wells and well sites overall, there would be a corresponding increase in truck
18 traffic on USFS and other roads, pipelines crossing the national forest, destruction of wildlife
19 habitat (on both private and federal land), erosion and sedimentation, risk of spills, and noise and
20 air pollution disturbing both visitors and residents of the Forest. Private lands are also adjacent to
21 national forest lands and streams, so any development on those lands could harm Forest
22 resources, such as clean air, healthy watersheds, and quiet recreation. *See, e.g.*, FS-9326, FS-
23 9916 (noting “private landowner could conduct activities that may result in sedimentation or
24 modification of aquatic habitat”); FS-9269 (“The fragmented ownership pattern of the Wayne
25 complicates resource protection and management.”). Further, much of the private surface within
26 the Forest is also forested, providing resource values that enhance the overall landscape,
27 including species habitat, scenic values, and a buffer against soil erosion and runoff pollution.
28 *See* FS-9461 (“almost 80 percent of the land (public and private) within the WNF proclamation

boundary are forested”); BLM-45306 (USFS map showing Marietta Unit’s forested areas); FS-9542 (“[T]he casual observer may be unable to distinguish whether scenery-altering activities have occurred on private land or [USFS] land...[L]and clearing for...mineral development on private land ha[s] caused noticeable changes in the landscape.”).

Nonetheless, the 2012 SIR fails to recognize the full scope of harms that would result from a greater number of wells and well sites impacting both the national forest and sensitive resources on private lands. The 2012 SIR’s failure to even acknowledge a potential increase in private land activities “leaves [the public] to guess whether [USFS]...even considered, this obvious potential impact.” *See Ocean Advocates*, 402 F.3d at 866.

In addition, by ignoring the potential for fracking activities to occur on private surface within the Forest’s boundaries, USFS unreasonably assumed that all activities to develop a federal lease would occur on federal land, and thus that their impacts would be avoided or minimized through mitigation measures provided in the 2006 Forest Plan EIS. But these unaccounted for fracking activities could occur on lands adjacent to or near federally owned surface, beyond the bounds of the USFS’s jurisdiction. Two concrete examples of how effects on specific resources were overlooked are provided in sections C and D below.

USFS’s consent finding that the 2006 Forest Plan EIS is adequate to address the impacts of oil and gas leasing is arbitrary and capricious. The 2006 Forest Plan EIS fails to analyze and disclose the impacts of private land development resulting from federal oil and gas leasing, and the 2012 SIR fails to consider whether these potential effects require the preparation of an SEIS.

2. BLM Failed to Take a Hard Look at Private Land Activities

Unlike USFS, BLM acknowledged the potential for federal oil and gas leasing to lead to private land development, BLM-1427, after Plaintiffs raised this issue in comments to both BLM and USFS. *See* BLM-51255. While BLM’s Draft EA failed to mention the potential for increased development and activity on private land that could result from BLM’s oil and gas leasing proposal, *see generally* BLM-25714-826, BLM’s Final EA concedes it “may” occur:

Given the highly fragmented nature of land ownership in the Marietta Unit, a well pad on one parcel, federal or private, may be serviced by roads, pipelines, tank batteries, and other infrastructure on other parcels in other ownerships. Second, an

operator may use directional drilling to locate a pad on a parcel not directly above the bottom hole location for various reasons, thus enabling federal minerals to be accessed from outside the federal surface.

BLM-1427; *see also* BLM-1339 (“Indirect effects may include development of oil and gas resources on non-Federal lands.”); BLM-1452 (federal leasing “may lead to additional future mineral development on private land and private minerals within the area”).

Despite this acknowledgement, in the Final EA BLM failed to revise its analysis of the number of new well sites that could be developed, and instead continued to use the projections that USFS relied on for the 2012 SIR. *See, e.g.*, BLM-1355, 1423 (climate analysis limited to 10 well pads). Instead, the EA purports to analyze private surface development without any quantitative analysis. It misleadingly states: “While the RFDS does not project any disturbance on private lands, this EA analysis covers the potential impacts of future oil and development on both the [USFS] lands and on adjacent private lands within the Marietta Unit.” BLM-1355. But the EA could not meaningfully analyze the effects of private land development without quantified analysis of its overall extent. BLM’s record provides no explanation for why it could not update its well-site and well projections, which Plaintiffs requested. BLM-51258. Such analysis is both feasible and required by NEPA. *See* p. 27 above. BLM routinely estimates the number of wells to be developed on private lands in its field offices, including related land disturbance. BLM-66904-05, 58817-20 (BLM’s Colorado field office projections).

BLM’s EA thus fails to acknowledge the full scope of impacts that opening up the Forest to oil and gas leasing would have on the Forest’s resources and surrounding landscape. Quantitative estimates of the total number of new well sites would enable meaningful analysis of the total acreage of forest that would be cleared; effects on forest habitat; effects of air pollution; magnitude of stream flow declines and effects on aquatic species; and the overall land-use change from a rural environment to an industrial zone. Merely acknowledging that private surface development “may” occur does not inform the public as to the potential “severity of the adverse effects” of BLM’s leasing plan, and precludes any assessment of their significance. *See Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 352 (1989).

Moreover, the EA fails as a qualitative analysis of the impacts of private land development. For example, it notes that the acreage impacted by oil and gas development “is very small in relation to the total acreage of the [Forest],” and concludes this would not have a “major effect” on the Forest’s “oak ecosystem” without addressing the potential for well sites on private lands adjacent to the Forest. BLM-1430. It further fails to address why “the loss of a few acres of canopy,” which “can result in the loss of suitability of hundreds of acres for habitat for...Cerulean warbler” is not a “major effect,” when this effect can be amplified many times over with new well sites on both federal and private land. *Id.*

BLM’s discussion of cumulative effects—which purports to analyze the combined effects of federal and private land development—also fails in this regard. It lacks any quantified estimate of the number of wells or well sites that could be developed on private land and quantitative analysis of resulting soil disturbance or habitat loss. *See* BLM-1452, 1456-58. As a qualitative analysis it provides no sense of the overall potential scale of impacts from private land development in connection with well sites on federal land. *Id.*; *Neighbors of Cuddy Mt. v. U.S. Forest Serv.*, 137 F.3d 1372, 1379 (9th Cir. 1998) (“To ‘consider’ cumulative effects, some quantified or detailed information is required. Without such information, neither the courts nor the public...can be assured that the [agency] provided the hard look that it is required to provide.”). By failing to quantify in any way a major, predictable, and important effect of the agencies’ action—the additional forest loss and infrastructure construction on private lands within the analysis area—BLM fails to accurately portray the environmental consequences.

Because the EA fails to meaningfully analyze private surface development and its impacts, BLM’s EA and FONSI are arbitrary and capricious.

C. USFS and BLM Overlooked Private Land Impacts on the Indiana Bat

USFS and BLM’s analysis of impacts to the endangered Indiana bat and other bat species suffers from a critical erroneous assumption. By only looking at the potential for fracking activities to occur on *federal* land within the Forest’s boundaries, USFS and BLM ignored the likelihood that forest clearing on private land, resulting from federal leasing, will destroy Indiana bat habitat on private land—and the agencies wrongly assumed that Forest Plan standards would

1 avoid or mitigate all such habitat loss. Private lands undergoing increased development to access
 2 federal minerals are not protected by the bat safeguards in the Forest Plan. As a result, USFS and
 3 BLM failed to analyze a major category of potential harm to the Indiana bat from horizontal well
 4 development.

5 Clearing of land for fracking activities could result in destruction of the Indiana bat's
 6 foraging areas, male roosting trees, and most significantly, summer maternal roosting trees. FS-
 7 10080. Maternal roosting trees are larger, mature trees with peeling bark, beneath which female
 8 bats burrow to raise their pups. FS-10472, 9817. Prime roosting habitat includes "snags"
 9 (standing dead trees) and hickory trees, both of which have bark that sloughs. FS-9817, 9818. A
 10 maternal roost colony may contain up to 100 adult females and their pups. FS-9817. Each colony
 11 can consist of a few roost trees or many (between 10 and 20 trees), including at least one primary
 12 roost tree and multiple alternative roosts. FS-9818. Female bats return to the same summer
 13 roosting grounds year after year. *Id.*

14 Oil and gas development on private surface in the Marietta Unit could disturb or destroy
 15 maternal roosting habitat: "Female and male Indiana bats use the [Forest] during the summer,
 16 and likely use non-Federal lands within the action area." FS-10062; *see also* BLM-1379
 17 ("Indiana bat...is well-documented on all units of the [Forest] and is present year-round.");
 18 FWS-6542 ("Comprehensive bat surveys across [the Forest] have not been conducted and
 19 Indiana bats may occur anywhere that has suitable habitat.").

20 USFS's 2012 SIR and BLM's 2016 EA point to FWS's 2005 Biological Opinion ("2005
 21 BiOp") for analysis of the effects of oil and gas development on Indiana bat habitat. USFS-5580;
 22 BLM-1431. But in evaluating the effects of habitat loss on the Indiana bat, the 2005 BiOp only
 23 considered the potential for loss of habitat on federal land in the Forest. *See* FS-10079-81.
 24 Accordingly, the agencies erroneously assumed *all* potential loss of maternal roost trees would
 25 be avoided under the 2006 Forest Plan. Specifically, the BiOp noted USFS would "apply [Forest
 26 Plan standards] to [oil and gas] projects to protect hibernation, roosting, and foraging habitat."
 27 FS-10080. "Because *all* snags and hickories will be avoided, it is extremely unlikely that a
 28

1 primary roost tree would be removed *during oil and gas development with Federal leases.*⁵ *Id.*
 2 (emphases added). Thus, the BiOp assumed any impacts from such development would be
 3 limited to “loss of an undetected secondary or lesser important roost tree, alteration of foraging
 4 habitat and disturbance from noise/human presence.” *Id.*

5 But significant maternal habitat destruction could occur with horizontal well development
 6 taking place on private lands. Private lands are not subject to Forest Plan restrictions that the
 7 2005 BiOp assumed would apply, including restrictions on the timing, types, or sizes of trees that
 8 may be cut (FS-9853), among other habitat protections. *See* FS-10180 (private land management
 9 under owner’s “discretion,” and USFS conservation measures “may not be used on these other
 10 ownerships”). Nor is oil and gas and development on private land subject to any state oversight
 11 or permitting requirements to protect wildlife and their habitat. BLM-1167 (comments raising
 12 this); FS-3496 (2012 Draft SIR: wildlife “do[es] not play a sizeable role in the state permitting
 13 process”); FS-9931 (private landowners “generally do not” conduct species field surveys before
 14 implementing projects); FS-10066 (Ohio does not regulate timber harvest on private land); FS-
 15 10079 (private landowners not required to “further [Indiana bat’s] conservation”). Thus, clearing
 16 of private land could lead to removal of maternal roost trees, and even felling of occupied trees
 17 during the summer roosting season, which could “directly harm[]” “one or more bats.” *See* FS-
 18 9854 (noting this could happen where USFS can only “request voluntary adherence” to Forest
 19 Plan’s bat safeguards); FS-10658. The failure to recognize this harm does not comport with
 20 NEPA’s goals of full and accurate public disclosure. *See Ctr. for Biological Diversity v. DOI*,
 21 623 F.3d 633, 645 (9th Cir. 2010) (agency failed to take a hard look at proposed transfer of
 22 federal land to private hands to facilitate mining plan by “assum[ing] that mining would occur on
 23 the selected lands in the same manner whether or not the exchange took place”).

24 USFS could not properly find that the 2006 Forest Plan EIS adequately addresses the
 25 impacts of oil and gas leasing. The 2006 Forest Plan EIS does not analyze the potential for
 26 horizontal well development to destroy maternal roost trees or other bat habitat on private lands,

27 ⁵ This statement is also erroneous because the referenced measure does not actually prohibit all cutting of
 28 snags or hickory, but restricts cutting to the hibernation season (September 15- April 15). FS-10115.

1 and the 2012 SIR fails to consider whether this potential effect must be analyzed in an SEIS.

2 Likewise, the BLM's failure to disclose and analyze this impact in its EA violates NEPA.

3 **D. BLM and USFS Failed to Analyze the Impacts of Water Depletions on the**
 4 **Little Muskingum River**

5 By ignoring or minimizing the potential for fracking activities to occur on non-federal
 6 land within the Forest's boundaries, USFS and BLM also overlooked the potential for massive
 7 water withdrawals for fracking activities to occur near or adjacent to national forest lands, but
 8 beyond the bounds of the Forest Service's jurisdiction. This led BLM and USFS to improperly
 9 conclude that any and all potential water depletion impacts on the Forest's streams and rivers
 10 would be avoided or minimized through mitigation measures provided in the 2006 Forest Plan.
 11 As a result, USFS and BLM overlooked the potential for significant water depletion effects on
 12 the Little Muskingum River, and the diverse and sensitive aquatic species it supports.

13 Fracking operations require massive amounts of water, which can lead to rapid depletion
 14 and dewatering of streams. FS-4245 (2 to 10 million gallons of water required to frack each
 15 horizontal well); BLM-1436 (4 to 8 million gallons required per well). As the 2012 SIR notes,
 16 however, Ohio does not regulate the timing, rate, or volume of water diversions for fracking
 17 operations. *See* FS-5556 ("[N]o agency (federal or state)...regulates water withdrawals from
 18 streams and rivers in...Ohio."). While USFS purportedly has some control over stream
 19 diversions from federal surface, *see* FS-5568, it has no control over stream diversions from
 20 private surface, even if that water is used for the development of federal minerals. *See* FS-3021.
 21 An internal draft of the 2012 SIR observed the "likely" potential for unchecked water
 22 withdrawals from private land to deplete streams in the national forest:

23 If industry places a drill pad on private lands that is located just upstream from
 24 [USFS] lands, and plans on drilling 6 wells from that pad, the volume of water
 25 needed for that operation will require millions of gallons of water. *If there is no*
 26 *regulation overseeing the withdrawals of water, then the stream could potentially*
be depleted of water and there could be negative impacts to the aquatic resources
for the portion of stream that flows through the WNF. The Forest Hydrologist
thinks this scenario is likely, and recommends close coordination between WNF
and state agencies to make sure water resources are not negatively impacted.

27 FS-3554 (emphasis added).
 28

1 The USFS Regional Office commented that a “potential fatal flaw” resulted from this
 2 “likely and significant adverse effect [having] not [been] disclosed in the Plan EIS.” *Id.* But
 3 rather than explaining in the 2012 SIR why such an effect would not be significant, or preparing
 4 an SEIS to address this effect, USFS simply swept it under the rug, omitting the above draft
 5 language from the 2012 SIR. Instead, it concluded: “By using *existing measures in the Forest*
 6 *Plan*, supported by Ohio reasonable use doctrine, there is no increased effect to surface water
 7 due to depletion, since at the site specific level the WNF will be able to control withdrawals and
 8 limit them to periods when water is plentiful.” FS-5569 (emphasis added). This does not address
 9 the problem of water withdrawals from private surface, over which USFS has no control. By not
 10 forthrightly addressing this issue in an SEIS, USFS failed to adequately disclose and consider
 11 this “likely and significant adverse effect” of massive water withdrawals, and precluded public
 12 input and consideration of how to mitigate these effects. Similarly, BLM’s EA concludes that
 13 water depletion effects would be “minimized by Forest Service policies for water withdrawal,”
 14 which says nothing about water withdrawals occurring on private lands. BLM-1337; BLM-1457.

15 The vast majority of the Marietta Unit’s streams feed into the Little Muskingum River,
 16 *see* BLM-1389-90, so water depletions occurring on private surface in the Forest would
 17 ultimately impact the river—via direct pumping either from the river or from its larger stream
 18 tributaries. Given that up to eight wells could be fracked from one well pad, FS-5531, the total
 19 amount of water diverted from the river over the course of a few months for a single well site
 20 could be enormous—up to 10 million gallons per well, or 80 million gallons per well pad. FS-
 21 4245. This would not just reduce the river’s flows, but also would deteriorate water quality by
 22 amplifying the effects of harmful pollutants; alter water chemistry, such as by reducing dissolved
 23 oxygen levels; and increase water temperatures as streams become shallower. FS-71; BLM-
 24 51277, 51299. All of these factors could degrade habitat for sensitive aquatic species in the river.
 25 *See* FS-10144-46 (stream degradation threatens eastern hellbender, eastern sand darter, and Ohio
 26 lamprey); FS-10062 (Indiana bat dependent on stream habitat for water and insect prey).

27 Because the 2006 Forest Plan EIS did not anticipate increased water use from fracking
 28 activities, and USFS failed to even consider this potential impact in the 2012 SIR, it did not

1 reasonably conclude that the 2006 Forest Plan adequately addresses the impacts of water
 2 depletions from fracking. Likewise, BLM's failure to take a hard look at the potential for
 3 depletion of and degradation of stream flows in the Little Muskingum River and its tributaries,
 4 and deterioration of aquatic habitat, results in an unsupported finding of no significant impact.

5 **E. BLM and USFS Failed to Take a Hard Look at the Air Quality and Public**
 6 **Health Impacts of Horizontal Well Development**

7 Oil and gas operations are among the major manmade sources of air pollution. BLM-
 8 45471, 30450, 60695-97. They emit a number of harmful pollutants, including nitrogen oxides
 9 (NOx), volatile organic compounds (VOCs), and hazardous air pollutants. *Id.* USFS and BLM
 10 failed to take a hard look at these pollutants' impacts on local and regional air quality in the
 11 Forest. Specifically, the agencies failed to quantify all reasonably foreseeable emissions from
 12 horizontal well operations, including the construction, fracking, and production stages, and failed
 13 to analyze whether those emissions would violate air quality standards, in light of past, present,
 14 and reasonably foreseeable future air pollution sources in the Forest's airshed.

15 Federal agencies evaluate air quality impacts under NEPA, in reference to the Clean Air
 16 Act's national health-protective standards for air quality. *See* BLM-45473-74. The Act requires
 17 that the Environmental Protection Agency ("EPA") establish national ambient air quality
 18 standards, or NAAQS, for certain widespread air pollutants that endanger public health and
 19 welfare, referred to as "criteria pollutants." 42 U.S.C. §§ 7408-7409. The NAAQS establish
 20 allowable concentrations of criteria pollutants in ambient air for the protection of public health
 21 and sensitive populations such as asthmatics, children, and the elderly. 42 U.S.C. § 7409(b)(1).

22 One criteria pollutant of concern is ground-level ozone. BLM-1362-63. Ozone exposure
 23 can lead to asthma attacks, irreversible lung damage, and premature death. FS-3966, 4035;
 24 BLM-51939, 55807. Fracking and horizontal drilling emit higher amounts of ozone precursors—
 25 NOx and VOCs (BLM-1414)—than vertical drilling. BLM-51281-51288. For example, the well
 26 completion process for a fracked well emits 200 times more VOCs than for a well that is not
 27 fracked. FS-4001. This process also results in up to twice the amount of methane leakage from
 28 the well (also an ozone precursor, BLM-1370), compared to conventional operations. FS-4088,

1 BLM-1414. Heavier truck traffic and increased gas compression and flaring can lead to higher
 2 combustion emissions, including NO_x. *See* FS-2969, 3966; BLM-60703, 51196-97, 51201.
 3 Other dangerous criteria pollutants emitted by horizontal drilling and fracking operations include
 4 particulate matter, sulfur dioxide, and carbon monoxide. BLM-56161-62, 56174; FS-3989, 4000.

5 The 2006 Forest Plan EIS is devoid of analysis of the impacts of conventional oil and gas
 6 development on air quality—no quantification of criteria pollutant emissions from vertical wells
 7 or analysis of their overall contribution to air quality degradation in the region is presented. *See*
 8 FS-9338-40. Further, the 2012 SIR concludes, without quantification or analysis, that air
 9 pollution from horizontal drilling and fracking activities “could release greater amounts of
 10 pollutants into the air” compared to conventional oil and gas operations, FS-5601, but that given
 11 “the low level of horizontal well activity projected to take place,” air quality effects “would be
 12 negligible.” FS-5602. The USFS regional office criticized the draft SIR’s lack of quantified
 13 analysis: “[This] says nothing substantive about effects. What is needed is a comparison of
 14 emissions disclosed in the Plan EIS and those expected from [high volume hydraulic
 15 fracturing].” FS-3502. But the SIR provides no meaningful comparison between air pollution
 16 emissions from vertical and horizontal well operations. *See* FS-5601-02; *see also Wilderness*
 17 *Workshop v. BLM*, 2018 U.S. Dist. Lexis 178506, *16-17 (faulting EIS for land-use plan for
 18 failing to quantify pollutants from future oil and gas wells).

19 Indeed, quantified analysis is standard practice for oil and gas decisions if a forecast of
 20 the number of new oil and gas wells is available. A 2011 “Memorandum of Understanding
 21 (MOU) Among the U.S. Department of Agriculture, U.S. Department of Interior, and U.S. EPA,
 22 Regarding Air Quality Analyses and Mitigation for Federal Oil and Gas Decisions through
 23 NEPA” (BLM-45471) directs BLM and USFS to quantify criteria pollutant emissions from
 24 future oil and gas development “prior to Federal oil and gas *planning, leasing*, or field
 25 development decisions” when preparing an EIS, or to consider doing so when preparing an EA.
 26 BLM-45478 (§ V.B), 45480 (§ V.D) (emphases added). Specifically, the “lead agency”
 27 conducting NEPA analysis “will prepare an Emissions Inventory of criteria pollutants” based on
 28 the “reasonably foreseeable number of oil or gas wells” “expected to be located within the

1 planning area.” BLM-45479-80 (§ V(E)(1)-(2)); *see* BLM-45476 (emissions inventory is “an
2 accounting of the amount of emissions ... discharged...from [the proposed action]”). Based on
3 the inventory, the agency may be required to perform modeling to assess the impact on
4 compliance with the NAAQS. *See* BLM-45480 (§ V(E)(3)-(5)); BLM-45474. Here, an emissions
5 inventory was feasible. In 2006 and 2012, BLM forecasted the number of vertical and horizontal
6 wells that could be developed in the Forest, respectively (the latter of which was an
7 underestimate, as explained above). *See* FS-5626-5640. And without a quantified analysis, USFS
8 lacks a reasoned basis for its decision not to prepare an SEIS in light of air quality effects.

9 Further, although it had the means to do so, USFS failed to analyze the cumulative air
10 quality effects of oil and gas leasing in the Forest with all other actions impacting air quality in
11 the planning area. In other words, USFS was required to not only quantify emissions from the
12 proposed oil and gas leasing, but also to analyze the future likelihood of complying with the
13 NAAQS once the leases are developed and their emissions are added to current and future
14 emissions levels from other sources (*e.g.*, private oil and gas wells in the region). This failure
15 violates NEPA. *See Colo. Env'tl. Coal. v. Salazar*, 875 F. Supp. 2d 1233, at 1256 (leasing
16 decision “failed to take the requisite ‘hard look’ at air quality effects...when accumulated with
17 air quality effects from anticipated oil and gas development outside the Planning Area”).

18 BLM’s analysis of air emissions from future oil and gas development on the lease parcels
19 also falls short of NEPA’s requirements. The EA lacks both a quantification of criteria pollutant
20 emissions from its leasing plan, and a quantified (and qualitative) cumulative impacts analysis, in
21 light of existing and reasonably foreseeable pollution sources. *See* BLM-1412-15, 1453. Indeed,
22 the Final EA conducts a quantitative analysis for greenhouse gas emissions (*e.g.*, carbon dioxide
23 and methane) from well construction and operations and from burning of the extracted oil or gas,
24 demonstrating a quantified analysis is feasible. BLM-1495; *see also* BLM-1418-1423.

25 In sum, BLM and USFS used conclusory claims and speculation to conclude that air
26 emissions from horizontal well operations would not be significant, rather than meaningful
27 analysis backed by quantitative data, even though such analysis was feasible. Without knowing
28 estimated levels of air pollution and their impacts on regional and local air quality, USFS and

1 BLM cannot support their findings that oil and gas leasing in the Forest would result in minimal
 2 impacts on air quality, or that this incremental increase would not cumulatively impact air
 3 quality in the project area in a significant manner. 40 C.F.R. § 1508.7.

4 **F. USFS and BLM Failed in their Duties to Prepare, Respectively, an SEIS and**
 5 **EIS**

6 BLM and USFS not only failed to take a “hard look” at the impacts of oil and gas leasing
 7 in the Forest, but also failed in their duty to prepare an EIS. Specifically, USFS was required to
 8 prepare an SEIS supplementing the 2006 Forest Plan EIS (or a new EIS), and BLM was required
 9 to prepare an EIS before authorizing oil and gas leasing in the Forest.⁶

10 “An EIS must be prepared if substantial questions are raised as to whether a project *may*
 11 cause significant degradation of some human environmental factor... [A] plaintiff need not show
 12 that significant effects will in fact occur....” *Ocean Advocates*, 402 F.3d at 865 (internal
 13 quotation marks and alterations omitted) (emphasis added). Similarly, preparation of an SEIS is
 14 triggered if a party raises a “substantial environmental issue” showing that the project “*may*
 15 *have*” significant adverse effects. *See La. Wildlife*, 761 F.2d at 1052 (emphasis in original); *see*
 16 *also Marsh*, 490 U.S. at 374 (“[W]hether to prepare a[n] [SEIS] is similar to the decision
 17 whether to prepare an EIS....”).

18 The CEQ regulations set out a number of “intensity factors” which may bear on the
 19 significance of a proposed action’s effects, any of which may be sufficient to require preparation
 20 of an EIS. *Nat’l Parks & Conservation Ass’n v. Babbitt* (“NPCA”), 241 F.3d 722, 731 (9th Cir.
 21 2001). Here, evidence in the record pertaining to the following intensity factors raise “substantial
 22 questions” as to whether oil and gas leasing would have significant effects: (1) “[t]he degree to
 23 which the effects...are likely to be highly controversial,” (2) “[t]he degree to which the possible
 24 effects...are highly uncertain or involve unique or unknown risks,” (3) “the degree to which the
 25 action may adversely affect an endangered...species,” and (4) “[u]nique characteristics of the
 26 geographic area such as proximity to... ecologically critical areas.” 40 C.F.R. § 1508.27(b).

27 ⁶ Or, either agency should have prepared a new EIS for both agencies to adopt. *See Anacostia Watershed*
 28 *Soc’y v. Babbitt*, 871 F. Supp. 475, 485 (D.D.C. 1994) (NEPA permits agency “in certain circumstances
 to adopt another agency’s [EIS].” (citing 40 C.F.R. § 1506.3)).

1 The controversial and uncertain nature of the effects of oil and gas leasing in the Forest
 2 trigger an EIS. A proposal is highly controversial when there is a “substantial dispute... as to the
 3 size, nature, or effect of the major federal action.” *Anglers*, 565 F. Supp. 2d at 827 (collecting
 4 authorities). As discussed above, Plaintiffs raised several issues before USFS and BLM that cast
 5 “serious doubt” on the size, nature, and effect of horizontal well development activities. USFS
 6 also failed to grapple with these issues it recognized internally. *See* sections II(A)-(D) above.

7 In addition, “[p]reparation of an EIS is mandated where uncertainty may be resolved by
 8 further collection of data, or where collection of such data may prevent speculation on
 9 potential... effects.” *NPCA*, 241 F.3d at 732 (internal citations and quotations omitted). Further
 10 study regarding the disputed effects, and air quality impacts, was certainly feasible, and could
 11 have resolved uncertainties. *See CBD*, 937 F. Supp. 2d at 1159 (unknown effects of fracking on
 12 local waters was “precisely why proper investigation was so crucial”). The 2012 SIR and EA’s
 13 “accumulation of numerous vague, conclusory, and incomplete analyses, raises ‘substantial
 14 questions’ about the possible significance of [oil and gas leasing in the Forest],” triggering an
 15 EIS. *Anglers*, 565 F. Supp. 2d at 830-31.

16 Potential harms to the Indiana bat discussed above also compel the preparation of an EIS.
 17 *See Bob House v. U.S. Forest Serv.*, 974 F. Supp. 1022, 1036 (E.D. Ky. 1997) (project’s harm to
 18 Indiana bat roosts triggered EIS). And finally, substantial questions were raised as to how
 19 unregulated depletions from the Little Muskingum basin could affect this unique and critical
 20 area. *See* 40 C.F.R. § 1508.27(b)(3); p.8 above (noting river’s exceptional qualities). An EIS is
 21 required to study these effects on the river’s “unique characteristics.” *See Bob House*, 974 F.
 22 Supp. at 1036 (project’s proximity to “significant geologic site” triggered EIS).

23 In sum, controversy and uncertainty over the effects of fracking on the Forest’s resources,
 24 and potentially significant impacts on the Indiana bat and the Little Muskingum River, compel
 25 USFS to prepare an SEIS, and BLM to prepare an EIS.

26 **III. BLM, USFS, and FWS Must Reinitiate Section 7 Consultation in Light of** 27 **New Information about Fracking and Horizontal Drilling**

28 BLM, USFS, and FWS each had a duty to reinitiate Section 7 ESA consultation over oil

1 and gas activities allowed under the 2006 Forest Plan in light of new information about fracking
2 and horizontal drilling, and their potential impacts on the endangered Indiana bat.⁷

3 The threshold for formal consultation, and its reinitiation, is low: where new information
4 shows a listed species “may” be affected in a manner or to an extent not previously considered,
5 both the action agency and the consulting agency have a duty to re-consult. “Any possible effect,
6 whether beneficial, benign, adverse or of an undetermined character, triggers the formal
7 consultation requirement...” *Colo. Envtl. Coal. v. Office of Legacy Mgmt.*, 819 F. Supp. 2d
8 1193, 1222 (D. Colo. 2011) (citing 51 Fed. Reg. 19,926, 19949 (June 3, 1986)) (emphasis in
9 original); *see id.* (finding even “highly unlikely” effect satisfied this standard). Like NEPA, the
10 ESA requires consideration of indirect effects on listed species. *See* 50 C.F.R. § 402.02. *Id.*
11 (“*Action area* means all areas to be affected directly or indirectly by the Federal action and not
12 merely the immediate area involved in the action.”). “Indirect effects are those that are caused by
13 the proposed action and are later in time, but still are reasonably certain to occur.” *Id.*

14 Because the 2005 BiOp pre-dated the rise of horizontal drilling, it did not address the
15 potential for clearing of private lands for development of federal oil and gas leases. The June 8,
16 2012 letter from FWS to USFS confirming reinitiation of consultation was unnecessary (“FWS
17 Concurrence Letter”)—which USFS and BLM both relied on in their determinations not to
18 reinitiate, FS-5597, BLM-1431—also does not consider this factor. *See* 5717-19. But this factor
19 “may affect” the Indiana bat “in a manner or to an extent not previously considered” in the 2005
20 BiOp, 50 C.F.R. § 402.16, triggering USFS, BLM, and FWS’s duty to re-consult.⁸

21 Oil and gas leasing could lead to clearing of forest on private lands, which could destroy
22 Indiana bat roosting trees. In consulting over the effects of a Federal action on a species, the
23 agency is not limited to considering just the effects of an action over which a federal agency has

24 ⁷ BLM was not a party to the consultation over the 2006 Forest Plan. *See* BLM-1349 But in its approval
25 of leasing in the Forest, it relied on the 2005 BiOp for its compliance with ESA Section 7. *See id.*

26 ⁸ In the alternative, BLM unlawfully failed to complete Section 7 consultation on its proposal to allow oil
27 and gas leasing in the Forest, because it “may affect” listed species. 50 C.F.R. § 402.14(a). On November
28 4, 2015, BLM initiated consultation with FWS over this proposal, BLM-44275-76, but never completed
the process with either a biological opinion or written concurrence from FWS that the proposal “is not
likely to adversely affect any listed species.” *See* 50 C.F.R. § 402.14(b)(1), (e). It determined that it could
rely on the 2005 BiOp, *see* BLM-1349-50, but that reliance is misplaced as explained below.

1 direct oversight or control, but any other effects “reasonably certain to occur,” including private
 2 land development induced by the federal action. *See Nat’l Wildlife Fed’n v. Coleman*, 529 F.2d
 3 359, 373 (5th Cir. 1976) (requiring consultation over the effects of private development on crane
 4 habitat, “which could be expected to result from the construction of [proposed federal]
 5 highway”). Effects on listed species occurring on areas outside of the lease parcels must also be
 6 considered. *Wilderness Soc’y v. Wisely*, 524 F. Supp. 2d 1285, 1305 (D. Col. 2007); *see also* FS-
 7 10047 (2005 BiOp considering effects of Forest Plan one mile beyond Forest’s boundary).

8 Here, it is reasonably certain that federal oil and gas leasing will lead to development of
 9 horizontal wells and related infrastructure on private lands, as explained above, resulting in (1)
 10 aggregate habitat loss greater than projected in the 2006 Forest Plan EIS; (2) unmitigated
 11 destruction of Indiana bat roosting habitat; and (3) loss of individual bats or colonies—none of
 12 which were considered in the 2005 BiOp. *See* pp. 31-34 above.⁹ Nor did FWS’s Concurrence
 13 Letter consider these effects. *See* FS-5717-19. Accordingly, USFS, BLM, and FWS’s reliance on
 14 this flawed determination and the 2005 BiOp is arbitrary and capricious, and the agencies are
 15 required to re-consult over the effects of oil and gas leasing. 50 C.F.R. § 402.16(b).

16 CONCLUSION

17 For the foregoing reasons, Plaintiffs respectfully request that the Court grant summary
 18 judgment in favor of Plaintiffs; set aside USFS’s June 15, 2016 consent to oil and gas leasing¹⁰
 19 (including parcels offered in the December 2016 and March 2017 auctions), BLM’s October 14,
 20 2016 FONSI and EA (including a later modified version), BLM’s December 12, 2016 and March
 21 23, 2017 Decision Records authorizing the December 2016 and March 2017 lease auctions, and
 22 all leases issued pursuant to those decisions; and enjoin development of those leases.¹¹ In
 23 addition, Plaintiffs respectfully request that the Court order Federal Defendants to reinitiate ESA
 24 Section 7 consultation on the 2006 Forest Plan.

25 ⁹ FWS was on notice of the potential for private land disturbance. FWS-6863.

26 ¹⁰ FS-14893, 14946, 14960, 14974, 14988.

27 ¹¹ 5 U.S.C. § 706(2) (reviewing court shall set aside agency action, findings, and conclusions found to be
 28 arbitrary and capricious); *Sierra Club v. Van Antwerp*, 719 F.Supp. 2d 77, 78 (D.D.C. 2010) (“[B]oth the
 Supreme Court and the D.C. Circuit Court have held that remand, along with vacatur, is the
 presumptively appropriate remedy for a violation of the APA.”).

1 DATED: December 17, 2018

Respectfully submitted,

2
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CERTIFICATE OF SERVICE

I certify that on December 17, 2018, I filed the following documents:

1. Notice of Motion
2. Plaintiffs' Opening Brief
3. Declaration of Kara Clauser and Exhibits A-D attached thereto
4. Declaration of Richard Sidwell
5. Declaration of Joseph Hazelbaker and Exhibits A-L attached thereto
6. Declaration of Kari McGee
7. Declaration of Jill Hunkler
8. Declaration of Bonie Bolen
9. Declaration of Kevin Peterca
10. Declaration of Alex Ferrato
11. Declaration of Rebecca Pollard
12. Declaration of Taylor McKinnon
13. Declaration of Wendy Park and Exhibit A attached thereto

on behalf of Plaintiffs Center for Biological Diversity, Heartwood, Ohio Environmental Council,
and Sierra Club via the CM/ECF system which will provide electronic service to all counsel of
record.

DATED: December 17, 2018

/s/ Wendy S. Park

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